city of greenville

Office Use Only:
Application# _____ Fees Paid _____
Date Received _____ Accepted By _____

APPLICATION FOR SPECIAL EXCEPTION
CITY OF GREENVILLE, SOUTH CAROLINA

APPLICANT / PERMITTEE*: Peaknet, LLC
Name Title / Organization

permit may be limited to this entity. _____

APPLICANT'S REPRESENTATIVE: Thomas H. Johnson, Jr. Williams Mullen
(Optional) Name Title / Organization

MAILING ADDRESS: 301 Fayetteville Street, Suite 1700, Raleigh, NC 27601

PHONE: 919-981-4006 EMAIL: tjohnson@williamsmullen.com

PROPERTY OWNER: Duke Energy Carolinas, LLC

MAILING ADDRESS: 550 S. Tryon Street, Suite 4500, Charlotte, NC 28202-4200

PHONE: 919-508-5400 EMAIL: _____

PROPERTY INFORMATION

STREET ADDRESS: 1040 Keys Drive, Greenville, SC 29615

TAX PARCEL #: 0547020100102 ACREAGE: 5.924 ZONING DESIGNATION: C-3

REQUEST

Refer to Article 19-4, Use Regulations, of the Land Management Ordinance (www.municode.com/library/)

DESCRIPTION OF PROPOSED LAND USE:

Wireless communications facility with 199 foot monopole tower and associated equipment.

INSTRUCTIONS

1. The application and fee, **made payable to the City of Greenville**, must be received by the planning and development office no later than 5:00 pm of the date reflected on the attached schedule.

2. The applicant/owner must respond to the "standards" questions on page 2 of this application (you must answer "why" you believe the application meets the tests for the granting of a special exception). See also ***Section 19-2.3.5, Special Exception Permit***, for additional information. You may attach a separate sheet addressing these questions.

3. You must attach a scaled drawing of the property that reflects, at a minimum, the following: (a) property lines, existing buildings, and other relevant site improvements; (b) the nature (and dimensions) of the proposed development (activity); (c) existing buildings and other relevant site improvements on adjacent properties; and, (d) topographic, natural features, etc. relevant to the requested special exception.

4. You must attach the required application fee: $250.00

5. The administrator will review the application for "sufficiency" pursuant to ***Section 19-2.2.6, Determination of Sufficiency***, prior to placing the application on the BZA agenda. If the application is determined to be "insufficient", the administrator will contact the applicant to request that the applicant resolve the deficiencies. ***You are encouraged to schedule an application conference with a planner, who will review your application for "sufficiency" at the time it is submitted. Call (864) 467-4476 to schedule an appointment.***

6. You must post the subject property at least 15 days (but not more than 18 days) prior to the scheduled hearing date.

_____ 'Public Hearing' signs are acknowledged as received by the applicant

Peaknet, LLC

By:X _____

Applicant Signature

7. **Please read carefully:** The applicant and property owner affirm that all information submitted with this application; including any/all supplemental information is true and correct to the best of their knowledge and they have provided full disclosure of the relevant facts.

In addition the applicant affirms that the applicant or someone acting on the applicant's behalf has made a reasonable effort to determine whether a deed or other document places one or more restrictions on the property that preclude or impede the intended use and has found no record of such a restriction.

If the planning office by separate inquiry determines that such a restriction exists, it shall notify the applicant. If the applicant does not withdraw or modify the application in a timely manner, or act to have the restriction terminated or waived, then the planning office will indicate in its report to the Board of Zoning Appeals that granting the requested change would not likely result in the benefit the applicant seeks.

To that end, the applicant hereby affirms that the tract or parcel of land subject of the attached application is ☐ or is not ☑ restricted by any recorded covenant that is contrary to, conflicts with, or prohibits the requested activity.

Peaknet, LLC

By: _____ APPLICANT / REPRESENTATIVE SIGNATURE

2-2-2022 _____ DATE

Duke Energy Carolinas, LLC

By: _____ Daniel A. Thibodeau - Land Services Manager _____ PROPERTY OWNER SIGNATURE

2 - 2 - 2022 _____ DATE

APPLICANT RESPONSE TO
SECTION 19-2.3.5(D)(1), STANDARDS – SPECIAL EXCEPTION

(YOU MAY ATTACH A SEPARATE SHEET)

1. DESCRIBE THE WAYS IN WHICH THE PROPOSED SPECIAL EXCEPTION IS CONSISTENT WITH THE COMPREHENSIVE PLAN.

See attached

2. DESCRIBE THE WAYS IN WHICH THE REQUEST WILL COMPLY WITH THE STANDARDS IN ***SECTION 19-4.3, USE SPECIFIC STANDARDS***.

See attached

3. DESCRIBE THE WAYS IN WHICH THE REQUEST IS APPROPRIATE FOR ITS LOCATION AND IS COMPATIBLE WITH THE CHARACTER OF EXISTING AND PERMITTED USES OF SURROUNDING LANDS AND WILL NOT REDUCE THE PROPERTY VALUES THEREOF.

See attached

4. DESCRIBE THE WAYS IN WHICH THE REQUEST WILL MINIMIZE ADVERSE EFFECTS ON ADJACENT LANDS INCLUDING: VISUAL IMPACTS; SERVICE DELIVERY; PARKING AND LOADING; ODORS; NOISE; GLARE; AND, VIBRATION. DESCRIBE THE WAYS IN WHICH THE REQUEST WILL NOT CREATE A NUISANCE.

See attached

APPLICANT RESPONSE TO
SECTION 19-2.3.5(D)(2), STANDARDS – CHANGE IN NONCONFORMING USE

(YOU MAY ATTACH A SEPARATE SHEET)

1. DESCRIBE THE WAYS IN WHICH THE PROPOSED NONCONFORMING USE IS MORE IN CHARACTER WITH, OR EQUAL TO, THE USES OTHERWISE PERMITTED IN THE ZONING DISTRICT THAN THE EXISTING OR PRIOR NONCONFORMING USES.

2. DESCRIBE THE WAYS IN WHICH THE PROPOSED NONCONFORMING USE WILL NOT SUBSTANTIALLY AND PERMANENTLY INJURE THE USE OF NEIGHBORING PROPERTY FOR THOSE USES PERMITTED WITHIN THE RELEVANT ZONING DISTRICT(S).

3. IS ADEQUATE INFRASTRUCTURE CAPACITY AVAILABLE TO SERVE THE PROPOSED NONCONFORMING USE?

4. IS THE PROPOSED USE ONE THAT IS OTHERWISE PERMISSIBLE IN ANOTHER ZONING DISTRICT WITHIN THE CITY?

Attachment to Application for Special Exception for
Peaknet Tower at 1040 Keys Drive

1. DESCRIBE THE WAYS IN WHICH THE PROPOSED SPECIAL EXCEPTION IS CONSISTENT WITH THE COMPREHENSIVE PLAN.

Reliable wireless service provides critical infrastructure for the community and has become even more important with more people working from home. The Comprehensive Plan recognizes the need for communications technologies to support work from home. With more citizens relying on wireless for voice and data communications, providing reliable service is even more important. With more citizens relying on wireless rather than landlines, reliable wireless provides critical access to 911 in the event of an emergency.

2. DESCRIBE THE WAYS IN WHICH THE REQUEST WILL COMPLY WITH THE STANDARDS IN SECTION 19-4.3, USE SPECIFIC STANDARDS.

The include engineered drawings demonstrate that the site meets the Use Specific Standards for a wireless communications facility in subsection (G). The plans include an eight foot fence with no barbed wire, landscaping and signage. The tower will not be lighted unless required by the FAA. The included preliminary report from the FAA shows that lighting is required because of the proximity to the airport. The ground equipment will be screened with landscaping. The monopole tower blends in with the existing structures at the electrical substation and will be in a commercial area. Since this tower is replacing existing antennas for Verizon and AT&T that are on adjacent electrical transmission towers that are being removed, the tower is critical for continuing and improving the existing service in the area and is an integral part of the existing wireless infrastructure. The tower and supporting structures will meet all building code requirements. The tower will be designed so that if it were to fail, it will remain on the property on which it is located. Also, the tower will be designed to accommodate 4 carriers and their ground equipment as required by the use standards.

3. DESCRIBE THE WAYS IN WHICH THE REQUEST IS APPROPRIATE FOR ITS LOCATION AND IS COMPATIBLE WITH THE CHARACTER OF EXISTING AND PERMITTED USES OF SURROUNDING LANDS AND WILL NOT REDUCE THE PROPERTY VALUES THEREOF.

The tower is replacing antennas currently located on two transmission towers. The tower will be located at an existing electrical substation in a commercial area, will blend in with its surroundings and, therefore, will not reduce adjoining property values.

4. DESCRIBE THE WAYS IN WHICH THE REQUEST WILL MINIMIZE ADVERSE EFFECTS ON ADJACENT LANDS INCLUDING: VISUAL IMPACTS; SERVICE DELIVERY; PARKING AND LOADING; ODORS; NOISE; GLARE; AND, VIBRATION. DESCRIBE THE WAYS IN WHICH THE REQUEST WILL NOT CREATE A NUISANCE.

The tower's visual impact will be minimal given it will be adjoining an electrical substation with existing tall electrical poles with wires and related structures. The compound will be surrounded by landscaping. The site will have very little traffic--one to two trips by service vehicles per month on average—and will not emit any odors, noise, glare or vibration.

VERIZON SITE NAME:	REDCLIFFE_RELO
AT&T SITE #:	177-493
AT&T SITE NAME:	SCL04934
PROJECT DESCRIPTION:	TELECOMMUNICATIONS COLOCATION
TOWER TYPE:	195' MONOPOLE
SITE ADDRESS:	1040 KEYS DRIVE GREENVILLE, SC 29615 (CITY OF GREENVILLE)
JURISDICTION:	CITY OF GREENSVILLE
AREA OF CONSTRUCTION:	0.27 AC (11,602 ± SQ. FT.)
PROPOSED LAND USE:	TELECOMMUNICATIONS FACILITY
CURRENT LAND USE :	TELECOMMUNICATIONS FACILITY
CURRENT ZONING:	C-3
PARCEL ID:	0547020100102

PROJECT INFORMATION

LATITUDE:	N 34° 50' 39.86" *
LONGITUDE:	W 82° 18' 49.29" *
GROUND ELEVATION:	1040.0± (AMSL) *

*INFORMATION PER 1A BY POINT TO POINT LAND SURVEYORS DATED APRIL 10, 2021

1A CERTIFICATION

verizon

8921 RESEARCH DRIVE
CHARLOTTE, NC 28262
(704) 519-9957

VERIZON
SITE NAME: REDCLIFFE_RELO
VERIZON
SITE NUMBER: 616936172
LOCATION CODE: 683979

1040 KEYS DRIVE
GREENVILLE, SC 29615
(CITY OF GREENVILLE)

at&t

218 COLLEGE STREET
GREENVILLE, SC 29601
OFFICE: (336) 286-6163

AT&T SITE #:177-493
AT&T SITE NAME: SCL04934
FA LOCATION CODE: 15550033

PLANS PREPARED FOR:

PeakNet

9887 FOURTH STREET N, ST 100
ST. PETERSBURG, FL 33702

PEAKNET SITE NAME:
ROPER'S MOUNTAIN

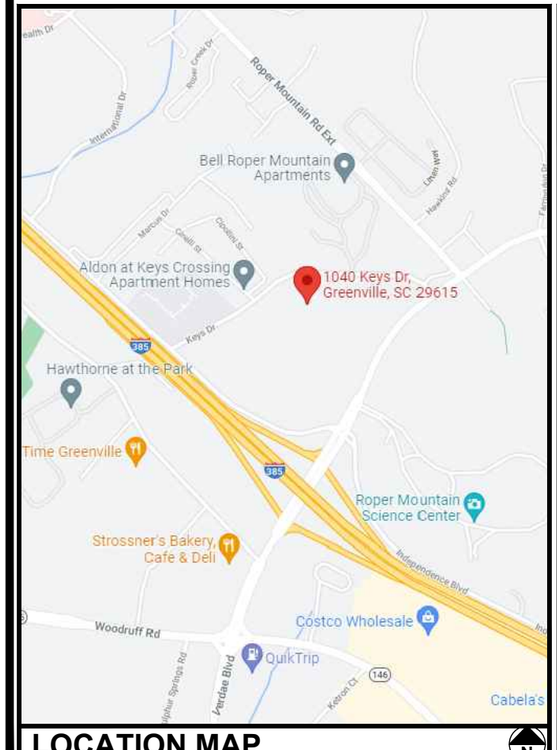
PLANS PREPARED BY:

STATE OF SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

REV	DATE	ISSUED FOR:
7	02-03-22	CONSTRUCTION
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY
2	10-15-21	PRELIMINARY
1	09-27-21	PRELIMINARY
0	09-17-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS



LOCATION MAP

LICENSEE 1:

NAME:	VERIZON WIRELESS
ADDRESS:	8921 RESEARCH DRIVE
CITY, STATE, ZIP:	CHARLOTTE, NC 28262
CONTACT:	SARAH KERNODLE
PHONE:	(704) 968-2998

LICENSEE 2:

NAME:	AT&T MOBILITY
ADDRESS:	218 COLLEGE STREET
CITY, STATE, ZIP:	GREENVILLE, SC 29601

TOWER OWNER:

NAME:	PEAKNET
SITE NAME:	ROPER'S MOUNTAIN
ADDRESS:	9887 4TH STREET NORTH, SUITE 100
CITY, STATE, ZIP:	SAINT PETERSBURG, FL 33702
CONTACT:	TIM SCOTT
PHONE:	(919) 413-5324

SURVEYOR:

NAME:	POINT TO POINT LAND SURVEYORS
ADDRESS:	100 GOVERNORS TRACE, STE. 103
CITY, STATE, ZIP:	PEACHTREE CITY, GA 30269
CONTACT:	G. DARRELL TAYLOR, P.L.S.
PHONE:	(678) 565-4440

PROPERTY OWNER:

NAME:	DUKE POWER COMPANY
ADDRESS:	PO BOX 1028
CITY, STATE, ZIP:	MANDAN, ND 58554
CONTACT:	CUSTOMER SERVICE
PHONE:	(919) 508-5400

CIVIL ENGINEER:

NAME:	TOWER ENGINEERING PROFESSIONALS
ADDRESS:	326 TRYON ROAD
CITY, STATE, ZIP:	RALEIGH, NC 27603-3530
CONTACT:	SCOTT C. BRANTLEY, P.E.
PHONE:	(919) 661-6351

ELECTRICAL ENGINEER:

NAME:	TOWER ENGINEERING PROFESSIONALS
ADDRESS:	326 TRYON ROAD
CITY, STATE, ZIP:	RALEIGH, NC 27603-3530
CONTACT:	MARK S. QUAKENBUSH, P.E.
PHONE:	(919) 661-6351

UTILITIES:

POWER COMPANY:	DUKE ENERGY
CONTACT:	CUSTOMER SERVICE
PHONE:	(800) 653-5307
METER # NEAR SITE:	UNKNOWN
FIBER COMPANY:	VERIZON
CONTACT:	CUSTOMER SERVICE
PHONE:	(704) 519-9957
PHONE # NEAR SITE:	UNKNOWN
PEDESTAL NEAR SITE:	UNKNOWN

CONTACT INFORMATION

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING:

1. INTERNATIONAL BUILDING CODE (2018 EDITION) W/ SC AMENDMENTS
2. SOUTH CAROLINA CODE COUNCIL
3. ANSI/TIA-222-H
4. 2017 NEC (NEC 2017 & ADDENDUM)
5. LOCAL BUILDING CODE
6. CITY/COUNTY ORDINANCES

CODE COMPLIANCE

SHEET	DESCRIPTION	REV
T1	TITLE SHEET	7
N1-N2	GENERAL NOTES	6
S1-S3	SURVEY	-
C1	SITE PLAN	6
C2	COMPOUND DETAIL	6
C3-C3D	TOWER ELEVATION & PROPOSED ANTENNA PLANS	6
C4	VERIZON EQUIPMENT LAYOUT	6
C5	VERIZON GENERATOR & EQUIPMENT DETAILS	6
C6	VERIZON FOUNDATION NOTES & DETAILS	6
C7-C7C	AT&T EQUIPMENT LAYOUT	6
C8	AT&T GENERATOR SPECIFICATIONS	6
C9-C10	AT&T FOUNDATION DETAILS	6
C11-C11B	VERIZON & AT&T ICE BRIDGE DETAILS	6
C12-C12A	FENCE & GATE DETAILS	7
C13	SIGNAGE DETAILS	6
C14	ACCESS ROAD DETAILS	6
C-15	GRADING & EROSION CONTROL PLAN	6
C-16	SILT FENCE DETAILS	6
C-17	CULVERT DETAILS	6
C-18	EROSION CONTROL MATTING DETAILS	6
L1-L2	LANDSCAPING PLAN AND DETAILS	6
E1	ELECTRICAL NOTES	6
E2A-E2B	VERIZON & AT&T PANEL SCHEDULES	6
E3-E3A	VERIZON & AT&T ONE-LINE DIAGRAMS	6
E4-E4B	POWER & TELCO ROUTING & DETAILS	6
E5A-E5C	SERVICE RACK & H-FRAME DETAILS	6
E6	GROUNDING NOTES	6
E7	GROUNDING PLAN	6
E8	ICE BRIDGE & TOWER GROUNDING DETAIL	6
E9	GROUND BAR DETAIL	6
E10-E11	GROUNDING DETAILS I & II	6
E12	GATE & FENCE GROUNDING DETAILS	7
E13	COAX/TOWER GROUNDING SCHEMATIC	6
E14	ANTENNA GROUND WIRE INSTALLATION	6
E15	GROUNDING SYSTEM SINGLE LINE DIAGRAM	6
	APPENDIX - PROPOSED MOUNT & MOUNT PIPE SPEC.	

INDEX OF SHEETS

SEAL:

STATE OF SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 38401
SCOTT BRANTLEY

February 3, 2022

SEAL:

STATE OF SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 32280
MARK S. QUAKENBUSH

February 3, 2022

SHEET NUMBER: **T-1**

REVISION: 7

TEP#:26351 6.598297

GENERAL NOTES:

1. ALL REFERENCES MADE TO LICENSEE IN THESE DOCUMENTS SHALL BE CONSIDERED VERIZON WIRELESS OR AT&T OR THEIR DESIGNATED REPRESENTATIVES.
2. ALL WORK PRESENTED ON THESE DRAWINGS MUST BE COMPLETED BY THE CONTRACTOR UNLESS NOTED OTHERWISE. THE CONTRACTOR MUST HAVE CONSIDERABLE EXPERIENCE IN PERFORMANCE OF WORK SIMILAR TO THAT DESCRIBED HEREIN. BY ACCEPTANCE OF THIS ASSIGNMENT, THE CONTRACTOR IS ATTESTING TO HAVE SUFFICIENT EXPERIENCE AND ABILITY, IS KNOWLEDGEABLE OF THE WORK TO BE PERFORMED AND IS PROPERLY LICENSED AND PROPERLY REGISTERED TO DO THIS WORK IN THE STATE OF SOUTH CAROLINA.
3. WORK SHALL BE COMPLETED IN ACCORDANCE WITH ANSI/TIA 222-H STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES, ASCE 7-05 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES AND THE INTERNATIONAL BUILDING CODE, 2018 EDITION.
4. UNLESS SHOWN OR NOTED OTHERWISE ON THE CONTRACT DRAWINGS, OR IN THE SPECIFICATIONS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED HEREIN, AND TO THE PROCEDURES TO BE USED ON THIS PROJECT.
5. ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERSEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
6. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER THE COMPLETION OF THE PROJECT.
7. THE LICENSEE SHALL HAVE A SET OF APPROVED PLANS AVAILABLE AT THE SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL CONDITIONS PRIOR TO SUBMITTING THE PROPOSAL. ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS SHOWN ON THE DRAWINGS (LATEST REVISION) SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING ANY MATERIALS ORDERING, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. CONTRACTOR SHALL NOT SCALE CONTRACT DRAWINGS IN LIEU OF FIELD VERIFICATION. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE LICENSEE AND THE LICENSEE'S ENGINEER. THE DISCREPANCIES MUST BE RESOLVED BEFORE THE CONTRACTOR IS TO PROCEED WITH THE WORK. THE CONTRACT DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE LICENSEE AND/OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE PROTECTIVE MEASURES OR THE PROCEDURES. A DESIGNATED RESPONSIBLE EMPLOYEE SHALL BE AVAILABLE FOR CONTACT BY GOVERNING AGENCY INSPECTORS.
8. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY THE LICENSEE AND ENGINEER PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.
9. THESE DOCUMENTS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. SAFETY, CARE OF ADJACENT PROPERTIES, AND COMPLIANCE WITH LOCAL, PROVINCIAL AND FEDERAL REGULATIONS REGARDING SAFETY, SHALL BE THE CONTRACTOR'S RESPONSIBILITY, AND THIS, PER THE INTERNATIONAL CODE – REGULATORS RESPECTING OCCUPATIONAL SAFETY & HEALTH THE SUCCESSFUL CONTRACTOR WILL SUBMIT HIS SAFETY MANUAL AT THE PROJECT SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.
10. ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS, WITH THE LICENSEE'S PROJECT MANAGER.
11. BILL OF MATERIALS AND PART NUMBERS LISTED ON CONSTRUCTION DRAWINGS ARE INTENDED TO AID CONTRACTOR/LICENSEE. CONTRACTOR/LICENSEE SHALL VERIFY PARTS AND QUANTITIES WITH MANUFACTURER PRIOR TO BIDDING AND/OR ORDERING MATERIALS.
12. THE CONTRACTOR SHALL REWORK (DRY, SCARIFY, ETC.) ALL MATERIAL NOT SUITABLE FOR SUBGRADE IN ITS PRESENT STATE. AFTER REWORKING, IF THE MATERIAL REMAINS UNSUITABLE, THE CONTRACTOR SHALL UNDERCUT THIS MATERIAL AND REPLACE WITH APPROVED MATERIAL. ALL SUBGRADES SHALL BE PROOF-ROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK PRIOR TO PAVING. ANY SOFT MATERIAL SHALL BE REWORKED OR REPLACED.
13. THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL PIPES, DITCHES, AND OTHER DRAINAGE STRUCTURES FREE FROM OBSTRUCTION UNTIL WORK IS ACCEPTED BY THE LICENSEE. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES CAUSED BY FAILURE TO MAINTAIN DRAINAGE STRUCTURE IN OPERABLE CONDITION.
14. ALL MATERIALS AND WORKMANSHIP SHALL BE WARRANTED FOR ONE YEAR FROM ACCEPTANCE DATE.
15. ANY BUILDINGS ON THIS SITE ARE INTENDED TO SHELTER EQUIPMENT WHICH WILL ONLY BE PERIODICALLY MAINTAINED, AND ARE NOT INTENDED FOR HUMAN OCCUPANCY.
16. TEMPORARY FACILITIES FOR PROTECTION OF TOOLS AND EQUIPMENT SHALL CONFORM TO LOCAL REGULATIONS AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
17. RENTAL CHARGES, SAFETY, PROTECTION AND MAINTENANCE OF RENTED EQUIPMENT SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
18. THE CONTRACTOR AND ITS SUBCONTRACTORS SHALL CARRY LIABILITY INSURANCE IN THE AMOUNTS AND FORM IN ACCORDANCE WITH SPECIFICATIONS. CERTIFICATES DEMONSTRATING PROOF OF COVERAGE SHALL BE PROVIDED TO PRIOR TO THE START OF THE WORK ON THE PROJECT.
19. THE CONTRACTOR SHALL CONTACT ALL APPLICABLE UTILITY SERVICES TO VERIFY LOCATIONS OF EXISTING UTILITIES AND REQUIREMENTS FOR NEW UTILITY CONNECTIONS PRIOR TO EXCAVATING. CONTRACTOR WILL BE RESPONSIBLE TO ASSIST IN COORDINATING AND OBTAINING PRIMARY POWER TO THE SITE PRIOR TO TOWER ERECTION BEFORE PROJECT COMPLETION. (ON SITE VISITS WITH UTILITY COMPANY REPRESENTATIVES AS NECESSARY, ETC...)
21. THE CONTRACTOR SHALL GUARANTEE THE WORK PERFORMED ON THE PROJECT BY THE CONTRACTOR AND ANY OR ALL OF THE SUBCONTRACTORS WHO PERFORMED WORK FOR THE CONTRACTOR ON THIS PROJECT. THE GUARANTEE SHALL BE FOR A FULL YEAR FOLLOWING ISSUANCE OF THE FINAL PAYMENT OF HOLDBACK.
22. AWARDED CONTRACTOR WILL BE REQUIRED TO SIGN AND RETURN A COPY OF AN AWARD LETTER FOR THE LICENSEE'S FILE.
23. CONTRACTOR WILL BE REQUIRED TO PROVIDE PROOF OF LICENSE TO PERFORM WORK IN JURISDICTION AT TIME OF BID AWARD.
24. CONTRACTOR WILL PROVIDE A CONSTRUCTION SCHEDULE PRIOR TO CONSTRUCTION STARTING AND WILL PROVIDE UPDATE/CHANGES (WITH EXPLANATIONS) TO THAT SCHEDULE WHEN/IF ITEMS ARE DELAYED OR PUSHED OUT.
25. CONTRACTOR WILL BE RESPONSIBLE TO PROVIDE PROJECT MANAGERS WITH PHOTOS OF THE MAJOR CONSTRUCTION MILESTONES AS THEY OCCUR.
26. CONTRACTOR SHOULD BE PREPARED FOR RANDOM SAFETY INSPECTIONS AT ALL TIMES.
27. CONTRACTOR IS EXPECTED TO MAINTAIN PROPER WORKING CONDITIONS AND PROCEDURES PER LOCAL AND FEDERAL STANDARDS AT ALL TIMES.
28. CONTRACTOR WILL BE REQUIRED TO OBTAIN THE NECESSARY ELECTRICAL PERMITS AND INSPECTIONS AS REQUIRED BY JURISDICTION.
29. CONTRACTOR IS RESPONSIBLE FOR CONCRETE COMPRESSION TESTING.
30. CONTRACTOR IS RESPONSIBLE FOR GROUND MEG TESTING AND PROVIDING PROOF OF RESULT.
31. WHEN REQUESTED, PROVIDE 3 COPIES OF FABRICATION AND ERECTION DRAWINGS PRIOR TO FABRICATION. ALLOW UP TO 1 WEEK FOR REVIEW BY CONSULTANT.
32. IN ADDITION TO CONTRACTOR'S QUALITY CONTROL PROGRAM, INDEPENDENT TESTING AND INSPECTION MAY BE PERFORMED BY LICENSEE OR LICENSEE'S REPRESENTATIVE.
33. SUBMIT RED-LINES COPY OF CONSTRUCTION DRAWINGS UPON COMPLETION OF CONSTRUCTION HIGHLIGHTING CHANGES IN THE STAMPED AND SIGNED AS-BUILT CONDITION FROM SHOWN ON THE DRAWINGS.
34. CONTRACTOR WILL BE RESPONSIBLE FOR ALL GRADING AND FILL COMPACTION TESTING REQUIRED AS SET FORTH IN THE GEO TECHNOLOGICAL REPORT PROVIDED BY LICENSEE.

CONCRETE:

1. ALL CONCRETE AND CONCRETE MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE, 2018 EDITION.
2. THE CONTRACTOR SHALL TAKE SAMPLES OF THE CONCRETE POURED UNDER THE CONDITIONS OUTLINED IN THE INTERNATIONAL BUILDING CODE, 2018 EDITION.
3. ANY FAILURE OF A CONCRETE TEST CYLINDER TO MEET THE SPECIFIED STRENGTH REQUIREMENTS MUST BE REPORTED TO THE DESIGN ENGINEER IMMEDIATELY. CORRECTIVE ACTION MUST BE APPROVED BY THE ENGINEER AND ALL RELATED COSTS SHALL BE AT THE CONTRACTOR'S EXPENSE.
4. THE MINIMUM 28-DAY COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE A MINIMUM OF 4,000 PSI (21 MPA), EXCEPT AS NOTED OR DIRECTED IN THE SOIL REPORT. THE CONCRETE, WHEN POURED, SHALL CONTAIN 7% AIR ENTRAINMENT WITH AN ALLOWABLE VARIATION OF +2%.
5. CONTRACTOR MUST TAKE SLUMP TEST AT LEAST ONCE FROM EACH TRANSIT MIXER AFTER A MINIMUM OF 5% CONCRETE LOAD HAD BEEN DISCHARGED. SLUMP, UNLESS NOTED OTHERWISE ON THE DRAWINGS, SHALL BE 75 MM (2.95 INCHES).
6. MIXED CONCRETE ON SITE (REMOTE AREAS) WITH THE CORRECT PROPORTION OF CEMENT, SAND, GRAVEL, AND AIR-ENTRAINING AGENT ALREADY ADDED, THE DRY PREMIX IS TO BE MIXED IN A CONCRETE BATCHER IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
7. BEFORE POURING CONCRETE, THE TRANSPORTING EQUIPMENT AND FORMS SHALL BE CLEANED AND ALL DEBRIS AND ICE SHALL BE REMOVED FROM PLACES TO BE OCCUPIED BY THE CONCRETE. ANY WATER THAT HAS ACCUMALATED IN THE FORMS SHALL BE REMOVED.
8. ALL CONCRETE SHALL BE VIBRATED AND WORKED AROUND THE REINFORCEMENTS, EMBEDDED FIXTURES AND INTO THE CORNERS OF THE FORMS. ANY EXCESS WATER THAT ACCUMALATES WHILE THE CONCRETE IS BEING POURED SHALL BE REMOVED.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA
PROFESSIONAL
LICENSED
ENGINEER
No. 38401
SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

GENERAL NOTES

SHEET NUMBER: **N-1**

REVISION: **6**

TEP#263516.598297

CONCRETE (CONTINUED):

9. THE DESIGN ENGINEER SHALL RECEIVE A MINIMUM OF 24 HOURS NOTICE OF EVERY POUR.

10. THE CONCRETE IN FOUNDATIONS MUST BE POURED IN CONTINOUS POURS BETWEEN CONSTRUCTION JOINTS. NO CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON SITE SPECIFIC DRAWINGS WILL BE PERMITTED. THE CONTRACTOR SHALL PROVIDE EFFICIENT EQUIPMENT TO COMPLETE THE POURING OF EACH SECTION IN ONE CONTINOUS POUR.

11. ALL FRAMEWORK SHALL BE BUILT IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE SHALL BE THOROUGHLY BRACED AND PLUMBED SO THAT THE FINISHED CONCRETE WILL CONFORM TO THE SHAPES, LINES, GRADES, AND DIMENSIONS INDICATED ON THE SITE DRAWINGS.

12. FORMS AND SHORING SHALL NOT BE REMOVED UNTIL THE CONCRETE IS ADEQUATELY SET. THEIR REMOVAL SHALL BE DONE IN SUCH A MANNER AS TO ENSURE THE COMPLETE SAFETY OF THE STRUCTURE.

13. FORMS WHICH SUPPORT THE WEIGHT OF THE CONCRETE, OR OF SUPERIMPOSED LOADS, SHALL NOT BE REMOVED UNTIL THE CONCRETE IS STRONG ENOUGH TO CARRY ITS OWN WEIGHT, AND SUCH SUPERIMPOSED LOADS AS MAY BE PLACED UPON IT.

14. THE CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR AT LEAST 5 DAYS AFTER IT HAS BEEN POURED.

15. ALL SURFACES WHICH ARE NOT PROTECTED BY FORMS OR A SEALED WATERPROOF COATING SHALL BE KEPT MOIST BY CONTINOUS SPRINKLING, OR OTHER MEANS SUCH AS COVERING WITH MOIST SAND, SAWDUST, OR BURLAP.

16. WHERE NECESSARY, THE CONCRETE SHALL BE PROTECTED AGAINST THE WEATHER BY A FRAMED HOUSING, TARPAULINS, OR OTHER SUITABLE COVERING.

REINFORCING STEEL (REBAR):

1. REINFORCING STEEL SHALL MEET CODE AND BE PLACED ACCORDING TO THE APPLICABLE DRAWINGS. THE MINIMUM THICKNESS OF CONCRETE OVER THE STEEL SHALL BE AT LEAST 3".

2. ALL REINFORCEMENTS THAT ARE REQUIRED FOR A DAYS POUR ON CONCRETE SHALL BE SECURELY FIXED IN PLACE IN SUFFICIENT TIME TO PERMIT INSPECTION BEFORE CONCRETING BEGINS.

3. THE DESIGN ENGINEER SHALL BE GIVEN 24 HOURS NOTICE BEFORE THE CONCRETE IS TO BE POURED. FAILURE TO COMPLY MAY NECESSITATE, BUT NOT BE LIMITED TO, THE REMOVAL OF THE POURED CONCRETE AT THE CONTRACTOR'S EXPENSE.

GROUTING:

1. WHERE GROUT IS INDICATED ON THE DRAWINGS UNDER STRUCTURAL BASE PLATES, THIS SHALL BE A NON-SHRINK, NON-FERROUS TYPE. METHODS OF MIXING AND PLACING MUST BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

COLD WEATHER CONCRETING:

1. THE CONTRACTOR SHALL PROVIDE AND HAVE ON THE SITE READY FOR USE, ADEQUATE EQUIPMENT FOR HEATING CONCRETE MATERIALS AND PROTECTING FRESH CONCRETE DURING FREEZING OR NEAR FREEZING WEATHER CONDITIONS, ACCORDING TO THE SOUTH CAROLINA UNIFORM STATEWIDE BUILDING CODE.

2. ALL CONCRETE MATERIALS, REBAR, FORMS, FILLERS, AND THE EARTH WITH WHICH THE CONCRETE IS TO COME INTO CONTACT WITH, SHALL BE FREE FROM FROST AND ICE.

3. WHENEVER THE SURROUNDING TEMPERATURE IS BELOW 39°F, ALL CONCRETE POURED IN THE FORMS SHALL HAVE A TEMPERATURE OF 68°F FOR 4 DAYS.

4. THE HOUSING, COVERING, OR OTHER PROTECTION USED FOR THE CURING SHALL REMAIN IN PLACE AND INTACT FOR AT LEAST 24 HOURS AFTER THE ARTIFICIAL HEATING IS DISCONTINUED.

5. SALT, CALCIUM CHLORIDE, OR OTHER CHEMICALS SHALL NOT BE USED IN THE CONCRETE MIX TO PREVENT THE WATER CONTENT FROM FREEZING.

UTILITIES:

1. CONTRACTOR SHALL CONTACT A SUBSURFACE UTILITY LOCATOR FOR LOCATION OF EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. LOCATION OF EXISTING SEWER, WATER LINES, GAS LINES, CONDUITS OR OTHER STRUCTURES ACROSS, UNDERNEATH, OR OTHERWISE ALONG THE LINE OF PROPOSED WORK ARE NOT NECESSARILY SHOWN ON THE PLANS, AND IF SHOWN ARE ONLY APPROXIMATELY CORRECT. CONTRACTOR ASSUMES SOLE RESPONSIBILITY FOR VERIFYING LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES (INCLUDING TEST PITS BY HAND IF NECESSARY) IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT ENGINEER IMMEDIATELY IF LOCATION OF ELEVATION IS DIFFERENT FROM THAT SHOWN ON THE PLANS, OR IF THERE APPEARS TO BE A CONFLICT.

2. CONTRACTOR SHALL COORDINATE ALL UTILITY CONNECTIONS WITH APPROPRIATE UTILITY LESSEES AND CONSTRUCTION MANAGER.

3. DAMAGE BY THE CONTRACTOR TO UTILITIES OR PROPERTY OF OTHERS, INCLUDING EXISTING PAVEMENT AND OTHER SURFACES DISTURBED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REPAIRED TO PRE-CONSTRUCTION CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE LICENSEE. FOR GRASSES AREAS, SEED AND MULCH SHALL BE ACCEPTABLE.

UTILITIES (CONT.):

4. THE CONTRACTOR SHALL COORDINATE WITH THE LICENSEE THE REQUIREMENTS FOR AND LIMITS OF OVERHEAD AND/OR UNDERGROUND ELECTRICAL SERVICE.

5. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF NEW UNDERGROUND TELEPHONE SERVICE WITH THE TELEPHONE UTILITY AND LICENSEE'S REQUIREMENTS.

6. ALL UNDERGROUND UTILITIES SHALL BE INSTALLED AND TESTED SATISFACTORY PRIOR TO COMMENCING ANY PAVING OPERATIONS WHERE SUCH UTILITIES ARE WITHIN THE LIMITS OF PAVEMENT.

SITE GRADING PREPARATION:

1. REMOVE OBSTRUCTIONS, TREES, SHRUBS, GRASS, AND OTHER VEGETATION TO PERMIT INSTALLATION OF NEW CONSTRUCTION.

2. DO NOT REMOVE TREES, SHRUBS, AND OTHER VEGETATION INDICATED TO REMAIN OR TO BE RELOCATED. DO NOT WORK OUTSIDE LICENSEE LICENSE AREA. CUT MINOR ROOTS AND BRANCHES OF TREES INDICATED TO REMAIN IN A CLEAN AND CAREFUL MANNER WHERE SUCH ROOTS AND BRANCHES OBSTRUCT INSTALLATION OF NEW CONSTRUCTION.

3. REMOVE STUMPS, OBSTRUCTIONS, AND DEBRIS EXTENDING TO A DEPTH OF 18 INCHES BELOW EXPOSED SUBGRADE. USE ONLY HAND METHODS FOR GRUBBING WITHIN TREE PROTECTION ZONE.

4. CHIP REMOVED TREE BRANCHES AND DISPOSE OF OFF-SITE.

5. UNLESS SPECIFICALLY NOTED ON THE CONSTRUCTION DRAWINGS THE ACCESS ROAD SHALL BE CLEARED OF ALL TREES WITHIN 10' ON EACH SIDE OF THE PROPOSED TRAVEL LANE OR 30 FEET WIDE, WHICHEVER IS GREATER.

6. FILL DEPRESSIONS CAUSED BY CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY SOIL MATERIAL UNLESS FURTHER EXCAVATION OR EARTHWORK IS INDICATED. PLACE FILL MATERIAL IN HORIZONTAL LAYERS NOT EXCEEDING A LOOSE DEPTH OF 8 INCHES AND COMPACT EACH LAYER TO A DENSITY EQUAL TO ADJACENT ORIGINAL GROUND.

7. REMOVED SOD AND GRASS BEFORE STRIPPING TOPSOIL. STRIP TOPSOIL TO WHATEVER DEPTHS ARE ENCOUNTERED IN A MANNER TO PREVENT INTERMINGLING WITH UNDERLYING SUBSOIL OR OTHER WASTE MATERIALS. REMOVE SUBSOIL AND NON-SOIL MATERIALS FROM TOPSOIL, INCLUDING TRASH, DEBRIS, WEEKS, ROOTS, AND OTHER WASTE MATERIALS.

8. STOCKPILE TOPSOIL MATERIALS AWAY FROM EDGE OF EXCAVATIONS WITHOUT INTERMIXING SUBSOIL. GRADE AND SHAPE STOCKPILES TO DRAIN SURFACE WATER. COVER TO PREVENT WINDBLOWN DUST OR CONTAMINATION BY AIR-BORNE WEED SEEDING. DO NOT STOCKPILE TOPSOIL WITHIN TREE PROTECTION ZONES.

9. UNLESS DIRECTED OTHERWISE BY LICENSEE CONSTRUCTION MANAGER ALL TOPSOIL THAT HAS BEEN STRIPPED OR CUT AND STOCKPILED, BUT IS NOT NEEDED AFTER THE COMPLETION OF ALL FINAL TOPSOIL SPREADING AND GRASSING, SHALL BE REMOVED FROM THE PROPERTY BY THE CONTRACTOR.

10. UNLESS DIRECTED OTHERWISE BY LICENSEE CONSTRUCTION MANAGER ALL TIMBER FROM CLEARING OPERATIONS SHALL BE REMOVED FROM THE PROPERTY.

11. REMOVED EXISTING ABOVE- AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND AS NECESSARY TO FACILITATE NEW CONSTRUCTION.

12. REMOVED SLABS, PAVING, CURBS, GUTTERS, AND AGGREGATE BASE AS INDICATED. UNLESS EXISTING FULL-DEPTH JOINTS COINCIDE WITH LINE DEMOLITION, NEATLY SAW-CUT LENGTH OF EXISTING PAVEMENT TO REMAIN BEFORE EXISTING PAVEMENT. SAW-CUT FACES VERTICALLY. PAINT CUT ENDS OF STEEL REINFORCEMENT IN CONCRETE TO REMAIN TO PREVENT CORROSION AND PROVIDE ORANGE SAFETY CAPS ON ALL BLUNT ENDS.

13. DISPOSAL: REMOVE SURPLUS SOIL MATERIAL, STUMPS, BRUSH, CHIPS, UNSUITABLE TOPSOIL, OBSTRUCTIONS, DEMOLISHED MATERIALS, AND WASTE MATERIALS INCLUDING TRASH AND DEBRIS, AND LEGALLY DISPOSE OF THEM OFF LICENSEE'S PROPERTY.

14. BURNING ON SITE IS PROHIBITED. BURYING STUMPS, BRUSH, TREES, AND ORGANIC MATTER IS PROHIBITED. SEPARATE RECYCLABLE MATERIALS PRODUCED DURING SITE CLEARING FROM OTHER NON-RECYCLABLE MATERIALS. STORE OR STOCKPILE WITHOUT INTERMIXING WITH OTHER MATERIALS AND TRANSPORT THEM TO RECYCLING FACILITIES.

PROJECT SCOPE:

1. THE EQUIPMENT DESIGN INCLUDES ONE (1) COMMSCOPE RBA84 CABINET.

2. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND MODIFYING SCOPE OF WORK FOR ENTIRE PROJECT TO ACCOMMODATE CHANGES IN THE EQUIPMENT DESIGN. CONFIRM NUMBER AND TYPE OF EQUIPMENT CABINETS SCHEDULED TO BE INSTALLED FOR THE INITIAL BUILD, AND COORDINATE ANY CHANGES TO THE PROJECT SCOPE WITH THE CM.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 38401
SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

GENERAL NOTES

SHEET NUMBER: **N-2**

REVISION: **6**

TEP#: 2635116.598297

PARENT PARCEL

OWNER: DUKE POWER COMPANY

SITE ADDRESS: 1040 KEYS DRIVE, GREENVILLE, SOUTH CAROLINA 29615

PARCEL ID: 0547020100102

AREA: 5.924 ACRES (PER TAX ASSESSOR)

ZONED: C-3

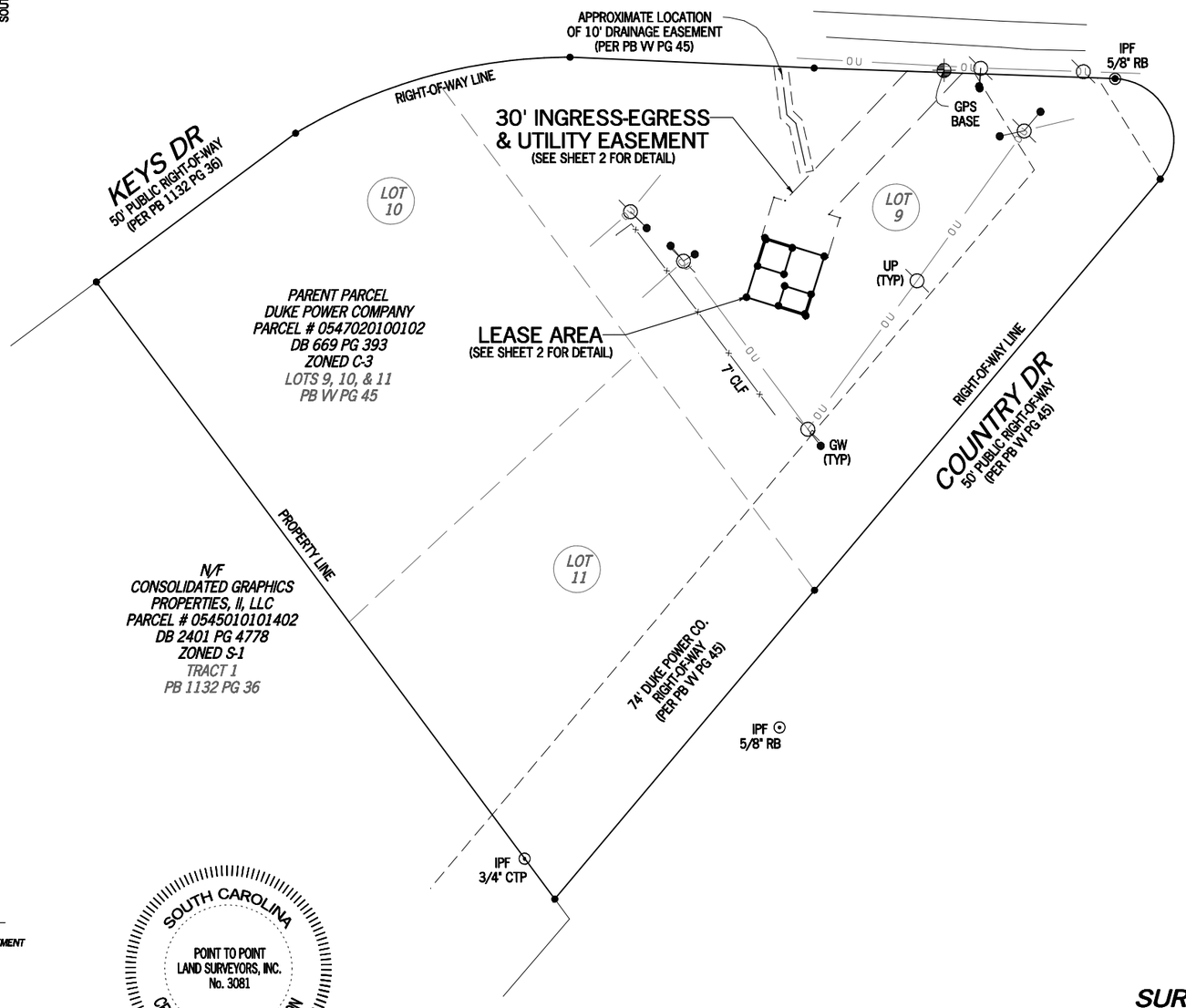
ALL ZONING INFORMATION SHOULD BE VERIFIED WITH THE PROPER ZONING OFFICIALS

REFERENCE: DEED BOOK 669 PAGE 393, PLAT BOOK VV PAGE 45

GPS NOTES

THE FOLLOWING GPS STATISTICS UPON WHICH THIS SURVEY IS BASED HAVE BEEN PRODUCED AT THE 95% CONFIDENCE LEVEL:

POSITIONAL ACCURACY: 0.02 FEET (HORZ) 0.22 FEET (VERT)
TYPE OF EQUIPMENT: GEOMAX ZENITH35 PRO BASE AND ROVER, DUAL FREQUENCY
TYPE OF GPS FIELD PROCEDURE: ONLINE POSITION USER INTERFACE
DATES OF SURVEY: 03/23/2021
DATUM / EPOCH: NAD_83(2011)(EPOCH:2010.0000)
PUBLISHED / FIXED CONTROL USE: N/A
GEOID MODEL: 18
COMBINED GRID FACTOR(S): 0.99995951 CENTERED ON THE GPS BASE POINT AS SHOWN HEREON.
CONVERGENCE ANGLE: -0.72806111°
BENCHMARKS USED: DK7758, DK4043, DH3755



GRID NORTH (NAD 83)
SOUTH CAROLINA

VICINITY MAP

NOT TO SCALE

GENERAL NOTES

* THIS SPECIFIC PURPOSE SURVEY IS FOR THE LEASED PREMISES AND EASEMENTS ONLY. THIS SPECIFIC PURPOSE SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF PEAKNET SERVICES, LLC AND EXCLUSIVELY FOR THE TRANSFERRAL OF THE LEASED PREMISES AND THE RIGHTS OF EASEMENT SHOWN HEREON AND SHALL NOT BE USED AS AN EXHIBIT OR EVIDENCE IN THE FEE SIMPLE TRANSFERRAL OF THE PARENT PARCEL NOR ANY PORTION OR PORTIONS THEREOF. BOUNDARY INFORMATION SHOWN HEREON HAS BEEN COMPILED FROM TAX MAPS AND DEED DESCRIPTIONS ONLY. NO BOUNDARY SURVEY OF THE PARENT PARCEL WAS PERFORMED.

THIS DRAWING DOES NOT REPRESENT A BOUNDARY SURVEY.

THIS SPECIFIC PURPOSE SURVEY WAS PREPARED WITHOUT BENEFIT OF A TITLE REPORT WHICH MAY REVEAL ADDITIONAL CONVEYANCES, EASEMENTS, OR RIGHTS-OF-WAY NOT SHOWN HEREON.

EQUIPMENT USED FOR ANGULAR & LINEAR MEASUREMENTS: LEICA TPS 1200 ROBOTIC & GEOMAX ZENITH 35. [DATE OF LAST FIELD VISIT: 03/23/2021]

THE 1' CONTOURS AND SPOT ELEVATIONS SHOWN ON THIS SPECIFIC PURPOSE SURVEY ARE ADJUSTED TO NAVD 88 DATUM (COMPUTED USING GEOID18) AND HAVE A VERTICAL ACCURACY OF ± 0.5'. CONTOURS OUTSIDE THE IMMEDIATE SITE AREA ARE APPROXIMATE.

BEARINGS SHOWN ON THIS SPECIFIC PURPOSE SURVEY ARE BASED ON GRID NORTH (NAD 83) SOUTH CAROLINA ZONE.

PER THE FEMA FLOODPLAIN MAPS, THE SITE IS LOCATED IN AN AREA DESIGNATED AS ZONE X (AREA OF MINIMAL FLOOD HAZARD). COMMUNITY PANEL NO. : 45045C0402E DATED: 08/18/2014

NO WETLAND AREAS HAVE BEEN INVESTIGATED BY THIS SPECIFIC PURPOSE SURVEY.

ALL ZONING INFORMATION SHOULD BE VERIFIED WITH THE PROPER ZONING OFFICIALS.

ANY UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM ABOVE GROUND FIELD SURVEY INFORMATION. THE SURVEYOR MAKES NO GUARANTEES THAT ANY UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT ANY UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED ANY UNDERGROUND UTILITIES.

LEGEND

POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
IPF	IRON PIN FOUND
RB	REBAR
CTP	CRIMPED TOP PIPE
N/F	NOW OR FORMERLY
C/L	CENTERLINE
UP	UTILITY POLE
OU	OVERHEAD UTILITY
GW	GUY WIRE ANCHOR
TYP	TYPICAL
CLF	CHAIN LINK FENCE
EP	EDGE OF PAVEMENT
MH	MANHOLE
UG	UNDERGROUND
TBM	TEMPORARY BENCHMARK

SOUTH CAROLINA
POINT TO POINT LAND SURVEYORS, INC.
No. 3081
CERTIFICATE OF AUTHORIZATION

SURVEYOR CERTIFICATION

I HEREBY STATE THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THE SURVEY SHOWN HEREON WAS MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE MINIMUM STANDARDS MANUAL FOR THE PRACTICE OF LAND SURVEYING IN SOUTH CAROLINA, AND MEETS OR EXCEEDS THE REQUIREMENTS FOR A CLASS "B" SURVEY SPECIFIED THEREIN.

THIS SURVEY IS NOT FOR RECORDATION PURPOSES.

SURVEY NOT VALID WITHOUT SHEET 2 & 3

811 Know what's below. Call before you dig.

SOUTH CAROLINA PROFESSIONAL LAND SURVEYOR
No. 28159
G. DARRELL TAYLOR
09/16/2021

NO.	DATE	REVISION
1	4/20/21	LEASE AREA SIZE - DMM
2	9/16/21	REVISED LAYOUT - AJT
3	10/5/21	LICENSE AREA
4	10/13/21	LICENSE AREA

* SPECIFIC PURPOSE SURVEY PREPARED BY:
POINT TO POINT LAND SURVEYORS
100 Governors Trace, Ste. 103
Peachtree City, GA 30269
(p) 678.565.4440 (f) 678.565.4497
(w) pointtopointsurvey.com

SPECIFIC PURPOSE SURVEY PREPARED FOR:

PeakNet

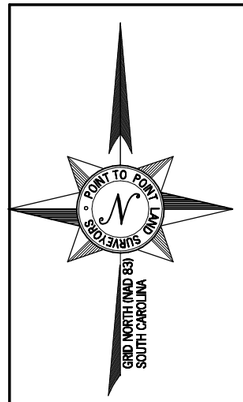
PEAKNET SERVICES, LLC
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

ROPER'S MOUNTAIN

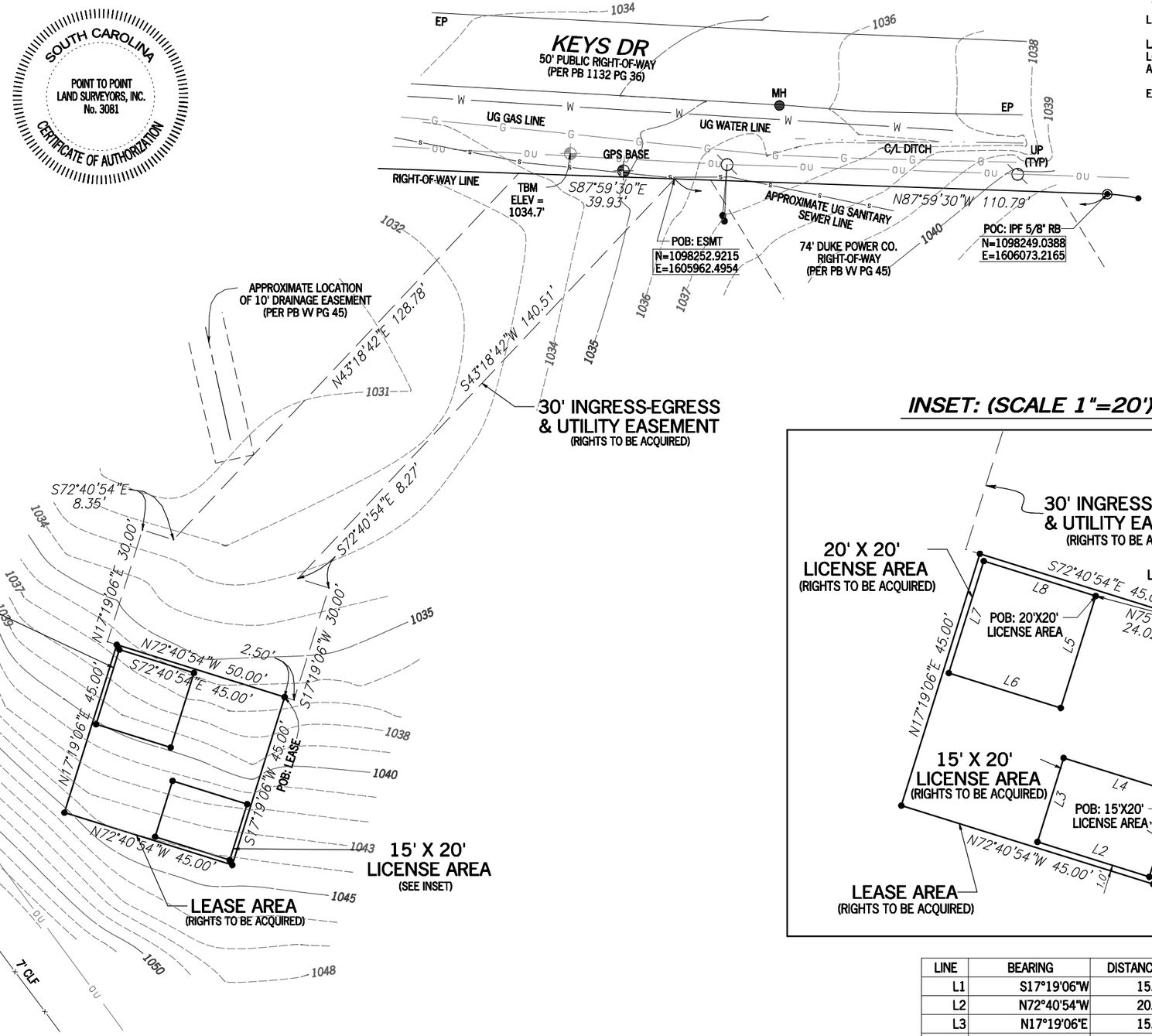
GREENVILLE COUNTY,
SOUTH CAROLINA

DRAWN BY: AJT	SHEET:
CHECKED BY: JKL	1
APPROVED: D. MILLER	OF 3
DATE: APRIL 10, 2021	
P2P JOB #: 210413SC	

E:\Dropbox (Point To Point)\P2P Current Jobs\2021\210413SC\Roper's Mountain\210413SC.pro



SOUTH CAROLINA
POINT TO POINT LAND SURVEYORS, INC.
No. 3081
CERTIFICATE OF AUTHORIZATION



SITE INFORMATION

LEASE AREA = 2,025 SQUARE FEET (0.0465 ACRES)

LATITUDE = 34°50'40.00" (NAD 83) (34.844444°)
LONGITUDE = -82°18'49.03" (NAD 83) (-82.313619°)
AT CENTER LEASE AREA

ELEVATION AT CENTER OF LEASE AREA = 1040.2' A.M.S.L.

INSET: (SCALE 1"=20')

LINE	BEARING	DISTANCE
L1	S17°19'06"W	15.00'
L2	N72°40'54"W	20.00'
L3	N17°19'06"E	15.00'
L4	S72°40'54"E	20.00'
L5	S17°19'06"W	20.00'
L6	N72°40'54"W	20.00'
L7	N17°19'06"E	20.00'
L8	S72°40'54"E	20.00'

LEGEND

POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
IPF	IRON PIN FOUND
RB	REBAR
CTP	CRIMPED TOP PIPE
N/F	NOW OR FORMERLY
C/L	CENTERLINE
UP	UTILITY POLE
OU	OVERHEAD UTILITY
GW	GUY WIRE ANCHOR
TYP	TYPICAL
CLF	CHAIN LINK FENCE
EP	EDGE OF PAVEMENT
MH	MANHOLE
UG	UNDERGROUND
TBM	TEMPORARY BENCHMARK

15 0 30 60
GRAPHIC SCALE IN FEET
SCALE: 1" = 30'

SURVEY NOT VALID WITHOUT SHEET 1 & 3

SOUTH CAROLINA PROFESSIONAL LAND SURVEYOR
No. 28159
G. DARRELL TAYLOR
09/16/2021

NO.	DATE	REVISION
1	4/20/21	LEASE AREA SIZE - DMM
2	9/16/21	REVISED LAYOUT - AJT
3	10/5/21	LICENSE AREA
4	10/13/21	LICENSE AREA

* SPECIFIC PURPOSE SURVEY PREPARED BY:

POINT TO POINT LAND SURVEYORS
100 Governors Trace, Ste. 103
Peachtree City, GA 30269
(p) 678.565.4440 (f) 678.565.4497
(w) pointtopointsurvey.com

SPECIFIC PURPOSE SURVEY PREPARED FOR:

PeakNet

PEAKNET SERVICES, LLC
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

ROPER'S MOUNTAIN

GREENVILLE COUNTY,
SOUTH CAROLINA

DRAWN BY: AJT
CHECKED BY: JKL
APPROVED: D. MILLER
DATE: APRIL 10, 2021
P2P JOB #: 210413SC

SHEET: 2 OF 3

E:\Dropbox (Point To Point)\P2P Current Jobs\2021\210413SC\Roper's Mountain\210413SC.pro

LEGAL DESCRIPTION SHEET

30' INGRESS-EGRESS & UTILITY EASEMENT

TOGETHER WITH A 30-FOOT WIDE INGRESS-EGRESS AND UTILITY EASEMENT LYING AND BEING IN GREENVILLE COUNTY, SOUTH CAROLINA, AND BEING A PORTION OF THE LANDS OF DUKE POWER COMPANY, AS RECORDED IN DEED BOOK 669, PAGE 393, GREENVILLE COUNTY RECORDS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

TO FIND THE POINT OF BEGINNING, COMMENCE AT A 5/8-INCH REBAR FOUND ON THE NORTHERN PROPERTY LINE OF SAID LANDS, LYING ON THE SOUTHERN RIGHT-OF-WAY LINE OF KEYS DRIVE (HAVING A 50-FOOT PUBLIC RIGHT-OF-WAY, PER PLAT BOOK 1132, PAGE 36, GREENVILLE COUNTY RECORDS), AND HAVING A SOUTH CAROLINA GRID NORTH, NAD 83, SOUTH CAROLINA ZONE VALUE OF N: 1098249.0388 E: 1606073.2165; THENCE RUNNING ALONG SAID RIGHT-OF-WAY LINE, NORTH 87°59'30" WEST, 110.79 FEET TO A POINT HAVING A SOUTH CAROLINA GRID NORTH, NAD 83, SOUTH CAROLINA ZONE VALUE OF N: 1098252.9215 E: 1605962.4954, AND BEING THE TRUE POINT OF BEGINNING; THENCE LEAVING SAID RIGHT-OF-WAY LINE AND RUNNING, SOUTH 43°18'42" WEST, 140.51 FEET TO A POINT; THENCE, SOUTH 72°40'54" EAST, 8.27 FEET TO A POINT; THENCE, SOUTH 17°19'06" WEST, 30.00 FEET TO A POINT; THENCE, NORTH 72°40'54" WEST, 50.00 FEET TO A POINT; THENCE, NORTH 17°19'06" EAST, 30.00 FEET TO A POINT; THENCE, SOUTH 72°40'54" EAST, 8.35 FEET TO A POINT; THENCE, NORTH 43°18'42" EAST, 128.78 FEET TO A POINT ON SAID RIGHT-OF-WAY LINE; THENCE RUNNING ALONG SAID RIGHT-OF-WAY LINE, SOUTH 87°59'30" EAST, 39.93 FEET TO A POINT AND THE POINT OF BEGINNING.

BEARINGS BASED ON SOUTH CAROLINA GRID NORTH, NAD 83, SOUTH CAROLINA ZONE.

SAID EASEMENT CONTAINS 0.1272 ACRES (5,539 SQUARE FEET), MORE OR LESS.

LEASE AREA

ALL THAT TRACT OR PARCEL OF LAND LYING AND BEING IN GREENVILLE COUNTY, SOUTH CAROLINA, AND BEING A PORTION OF THE LANDS OF DUKE POWER COMPANY, AS RECORDED IN DEED BOOK 669, PAGE 393, GREENVILLE COUNTY RECORDS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

TO FIND THE POINT OF BEGINNING, COMMENCE AT A 5/8-INCH REBAR FOUND ON THE NORTHERN PROPERTY LINE OF SAID LANDS, LYING ON THE SOUTHERN RIGHT-OF-WAY LINE OF KEYS DRIVE (HAVING A 50-FOOT PUBLIC RIGHT-OF-WAY, PER PLAT BOOK 1132, PAGE 36, GREENVILLE COUNTY RECORDS), AND HAVING A SOUTH CAROLINA GRID NORTH, NAD 83, SOUTH CAROLINA ZONE VALUE OF N: 1098249.0388 E: 1606073.2165; THENCE RUNNING ALONG SAID RIGHT-OF-WAY LINE, NORTH 87°59'30" WEST, 110.79 FEET TO A POINT HAVING A SOUTH CAROLINA GRID NORTH, NAD 83, SOUTH CAROLINA ZONE VALUE OF N: 1098252.9215 E: 1605962.4954; THENCE LEAVING SAID RIGHT-OF-WAY LINE AND RUNNING, SOUTH 43°18'42" WEST, 140.51 FEET TO A POINT; THENCE, SOUTH 72°40'54" EAST, 8.27 FEET TO A POINT; THENCE, SOUTH 17°19'06" WEST, 30.00 FEET TO A POINT; THENCE, NORTH 72°40'54" WEST, 2.50 FEET TO A POINT AND THE TRUE POINT OF BEGINNING; THENCE, SOUTH 17°19'06" WEST, 45.00 FEET TO A POINT; THENCE, NORTH 72°40'54" WEST, 45.00 FEET TO A POINT; THENCE, NORTH 17°19'06" EAST, 45.00 FEET TO A POINT; THENCE, SOUTH 72°40'54" EAST, 45.00 FEET TO A POINT AND THE POINT OF BEGINNING.

BEARINGS BASED ON SOUTH CAROLINA GRID NORTH, NAD 83, SOUTH CAROLINA ZONE.

SAID TRACT CONTAINS 0.0465 ACRES (2,025 SQUARE FEET), MORE OR LESS.

SOUTH CAROLINA
POINT TO POINT
LAND SURVEYORS, INC.
No. 3081
CERTIFICATE OF AUTHORIZATION

15' X 20' LICENSE AREA

ALL THAT TRACT OR PARCEL OF LAND LYING AND BEING IN GREENVILLE COUNTY, SOUTH CAROLINA, AND BEING A PORTION OF THE LANDS OF DUKE POWER COMPANY, AS RECORDED IN DEED BOOK 669, PAGE 393, GREENVILLE COUNTY RECORDS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

TO FIND THE POINT OF BEGINNING, COMMENCE AT A 5/8-INCH REBAR FOUND ON THE NORTHERN PROPERTY LINE OF SAID LANDS, LYING ON THE SOUTHERN RIGHT-OF-WAY LINE OF KEYS DRIVE (HAVING A 50-FOOT PUBLIC RIGHT-OF-WAY, PER PLAT BOOK 1132, PAGE 36, GREENVILLE COUNTY RECORDS), AND HAVING A SOUTH CAROLINA GRID NORTH, NAD 83, SOUTH CAROLINA ZONE VALUE OF N: 1098249.0388 E: 1606073.2165; THENCE RUNNING ALONG SAID RIGHT-OF-WAY LINE, NORTH 87°59'30" WEST, 110.79 FEET TO A POINT HAVING A SOUTH CAROLINA GRID NORTH, NAD 83, SOUTH CAROLINA ZONE VALUE OF N: 1098252.9215 E: 1605962.4954; THENCE LEAVING SAID RIGHT-OF-WAY LINE AND RUNNING, SOUTH 43°18'42" WEST, 140.51 FEET TO A POINT; THENCE, SOUTH 72°40'54" EAST, 8.27 FEET TO A POINT; THENCE, SOUTH 17°19'06" WEST, 30.00 FEET TO A POINT; THENCE, NORTH 72°40'54" WEST, 2.50 FEET TO A POINT LOCATED ON THE NORTHEAST CORNER OF THE LEASE AREA; THENCE RUNNING FOR A TIE LINE, SOUTH 19°17'36" WEST 29.02 FEET TO A POINT AND THE TRUE POINT OF BEGINNING; THENCE, SOUTH 17°19'06" WEST, 15.00 FEET TO A POINT; THENCE, NORTH 72°40'54" WEST, 20.00 FEET TO A POINT; THENCE, NORTH 17°19'06" EAST, 15.00 FEET TO A POINT; THENCE, SOUTH 72°40'54" EAST, 20.00 FEET TO A POINT AND THE POINT OF BEGINNING.

BEARINGS BASED ON SOUTH CAROLINA GRID NORTH, NAD 83, SOUTH CAROLINA ZONE.

SAID TRACT CONTAINS 0.0069 ACRES (300 SQUARE FEET), MORE OR LESS.

20' X 20' LICENSE AREA

ALL THAT TRACT OR PARCEL OF LAND LYING AND BEING IN GREENVILLE COUNTY, SOUTH CAROLINA, AND BEING A PORTION OF THE LANDS OF DUKE POWER COMPANY, AS RECORDED IN DEED BOOK 669, PAGE 393, GREENVILLE COUNTY RECORDS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

TO FIND THE POINT OF BEGINNING, COMMENCE AT A 5/8-INCH REBAR FOUND ON THE NORTHERN PROPERTY LINE OF SAID LANDS, LYING ON THE SOUTHERN RIGHT-OF-WAY LINE OF KEYS DRIVE (HAVING A 50-FOOT PUBLIC RIGHT-OF-WAY, PER PLAT BOOK 1132, PAGE 36, GREENVILLE COUNTY RECORDS), AND HAVING A SOUTH CAROLINA GRID NORTH, NAD 83, SOUTH CAROLINA ZONE VALUE OF N: 1098249.0388 E: 1606073.2165; THENCE RUNNING ALONG SAID RIGHT-OF-WAY LINE, NORTH 87°59'30" WEST, 110.79 FEET TO A POINT HAVING A SOUTH CAROLINA GRID NORTH, NAD 83, SOUTH CAROLINA ZONE VALUE OF N: 1098252.9215 E: 1605962.4954; THENCE LEAVING SAID RIGHT-OF-WAY LINE AND RUNNING, SOUTH 43°18'42" WEST, 140.51 FEET TO A POINT; THENCE, SOUTH 72°40'54" EAST, 8.27 FEET TO A POINT; THENCE, SOUTH 17°19'06" WEST, 30.00 FEET TO A POINT; THENCE, NORTH 72°40'54" WEST, 2.50 FEET TO A POINT LOCATED ON THE NORTHEAST CORNER OF THE LEASE AREA; THENCE RUNNING FOR A TIE LINE, NORTH 75°04'03" WEST 24.02 FEET TO A POINT AND THE TRUE POINT OF BEGINNING; THENCE, SOUTH 17°19'06" WEST, 20.00 FEET TO A POINT; THENCE, NORTH 72°40'54" WEST, 20.00 FEET TO A POINT; THENCE, NORTH 17°19'06" EAST, 20.00 FEET TO A POINT; THENCE, SOUTH 72°40'54" EAST, 20.00 FEET TO A POINT AND THE POINT OF BEGINNING.

BEARINGS BASED ON SOUTH CAROLINA GRID NORTH, NAD 83, SOUTH CAROLINA ZONE.

SAID TRACT CONTAINS 0.0092 ACRES (400 SQUARE FEET), MORE OR LESS.

SURVEY NOT VALID WITHOUT SHEET 1 & 2

SOUTH CAROLINA PROFESSIONAL LAND SURVEYOR
No. 28159
G. DARRELL TAYLOR
09/16/2021

NO.	DATE	REVISION
1	4/20/21	LEASE AREA SIZE - DMM
2	9/16/21	REVISED LAYOUT - AJT
3	10/5/21	LICENSE AREA
4	10/13/21	LICENSE AREA

* SPECIFIC PURPOSE SURVEY PREPARED BY:
POINT TO POINT LAND SURVEYORS
100 Governors Trace, Ste. 103
Peachtree City, GA 30269
(p) 678.565.4440 (f) 678.565.4497
(w) pointtopointsurvey.com

SPECIFIC PURPOSE SURVEY PREPARED FOR:

PeakNet

PEAKNET SERVICES, LLC
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

ROPER'S MOUNTAIN

GREENVILLE COUNTY,
SOUTH CAROLINA

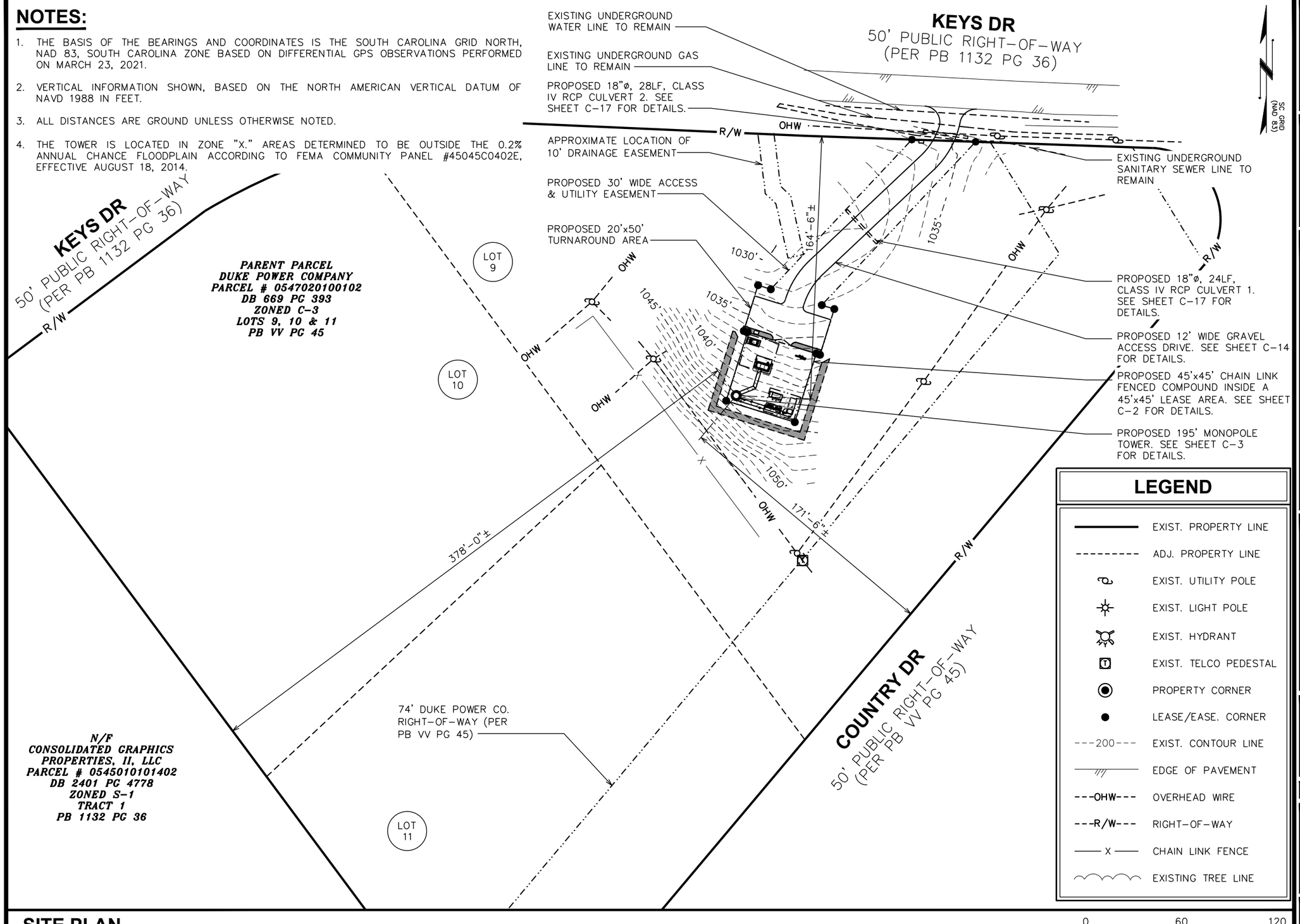
DRAWN BY: AJT
CHECKED BY: JKL
APPROVED: D. MILLER
DATE: APRIL 10, 2021
P2P JOB #: 210413SC

SHEET: 3 OF 3

E:\Dropbox (Point To Point)\P2P Current Jobs\2021\210413SC-Roper's Mountain\210413SC.pro

NOTES:

1. THE BASIS OF THE BEARINGS AND COORDINATES IS THE SOUTH CAROLINA GRID NORTH, NAD 83, SOUTH CAROLINA ZONE BASED ON DIFFERENTIAL GPS OBSERVATIONS PERFORMED ON MARCH 23, 2021.
2. VERTICAL INFORMATION SHOWN, BASED ON THE NORTH AMERICAN VERTICAL DATUM OF NAVD 1988 IN FEET.
3. ALL DISTANCES ARE GROUND UNLESS OTHERWISE NOTED.
4. THE TOWER IS LOCATED IN ZONE "X." AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO FEMA COMMUNITY PANEL #45045C0402E, EFFECTIVE AUGUST 18, 2014.



LEGEND

- EXIST. PROPERTY LINE
- ADJ. PROPERTY LINE
- EXIST. UTILITY POLE
- EXIST. LIGHT POLE
- EXIST. HYDRANT
- EXIST. TELCO PEDESTAL
- PROPERTY CORNER
- LEASE/EASE. CORNER
- ---200--- EXIST. CONTOUR LINE
- EDGE OF PAVEMENT
- ---OHW--- OVERHEAD WIRE
- ---R/W--- RIGHT-OF-WAY
- —— X —— CHAIN LINK FENCE
- EXISTING TREE LINE

SITE PLAN

SCALE: 1" = 60'

0 60 120

SCALE IN FEET

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
TEP OPCO, LLC
5399

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 28402
SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

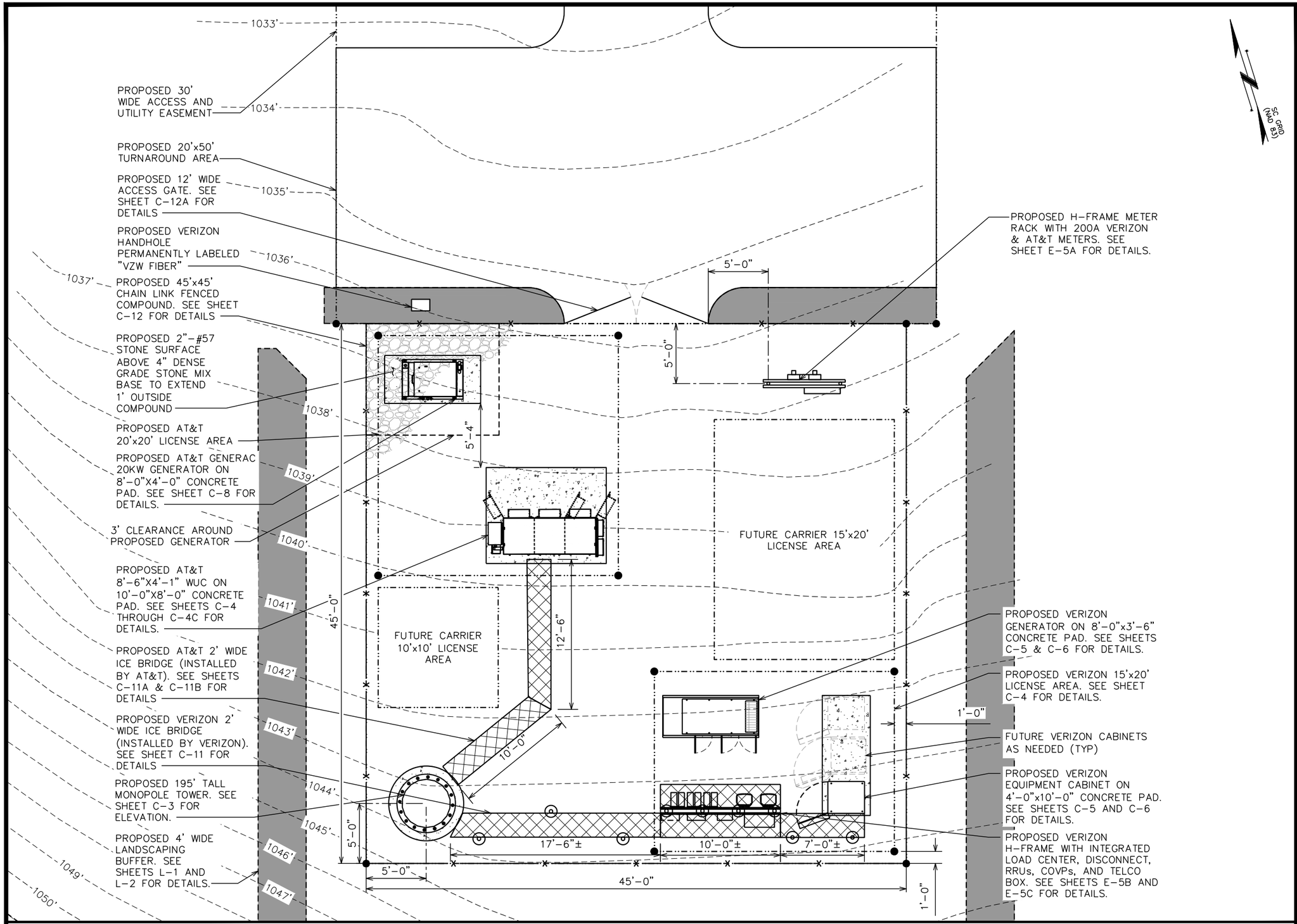
SHEET TITLE:

SITE PLAN

SHEET NUMBER: **C-1**

REVISION: **6**

TEP#:263516.598297



COMPOUND DETAIL

SCALE: 1/8" = 1'-0"

0 8 16

SCALE IN FEET

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 18401
SCOTT BRANTLEY
January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

COMPOUND DETAIL

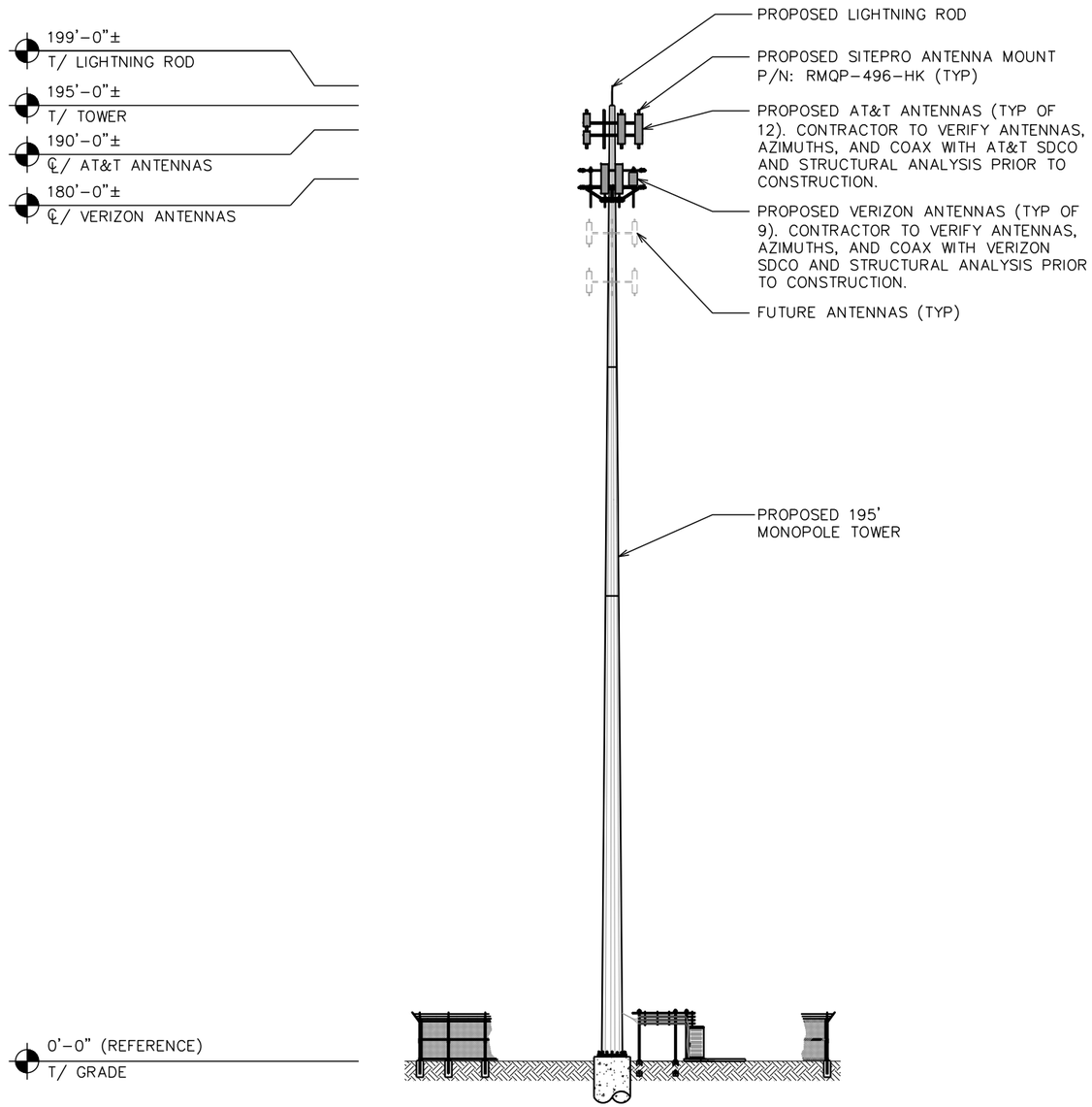
SHEET NUMBER: **C-2**

REVISION: 6

TEP#263516.598297

NOTES:

1. PROPOSED CABLES TO BE RUN AS PER SPECIFICATIONS OF PASSING STRUCTURAL ANALYSIS.
2. TOWER SHALL BE CONSTRUCTED OF GALVANIZED STEEL OR PAINTED PER APPLICABLE STANDARDS OF THE FAA OR OTHER APPLICABLE FEDERAL OR STATE AGENCY.
3. TOWER ELEVATION SHOWN FOR REFERENCE ONLY. VERIFY ACTUAL TOWER DESIGN & LOADING WITH TOWER DRAWINGS FROM MANUFACTURER AND/OR PASSING STRUCTURAL ANALYSIS PRIOR TO CONSTRUCTION.



TOWER ELEVATION

SCALE: 1" = 30'

0 30 60

SCALE IN FEET

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
TEP OPCO, LLC
5399

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 38402
SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

TOWER ELEVATION

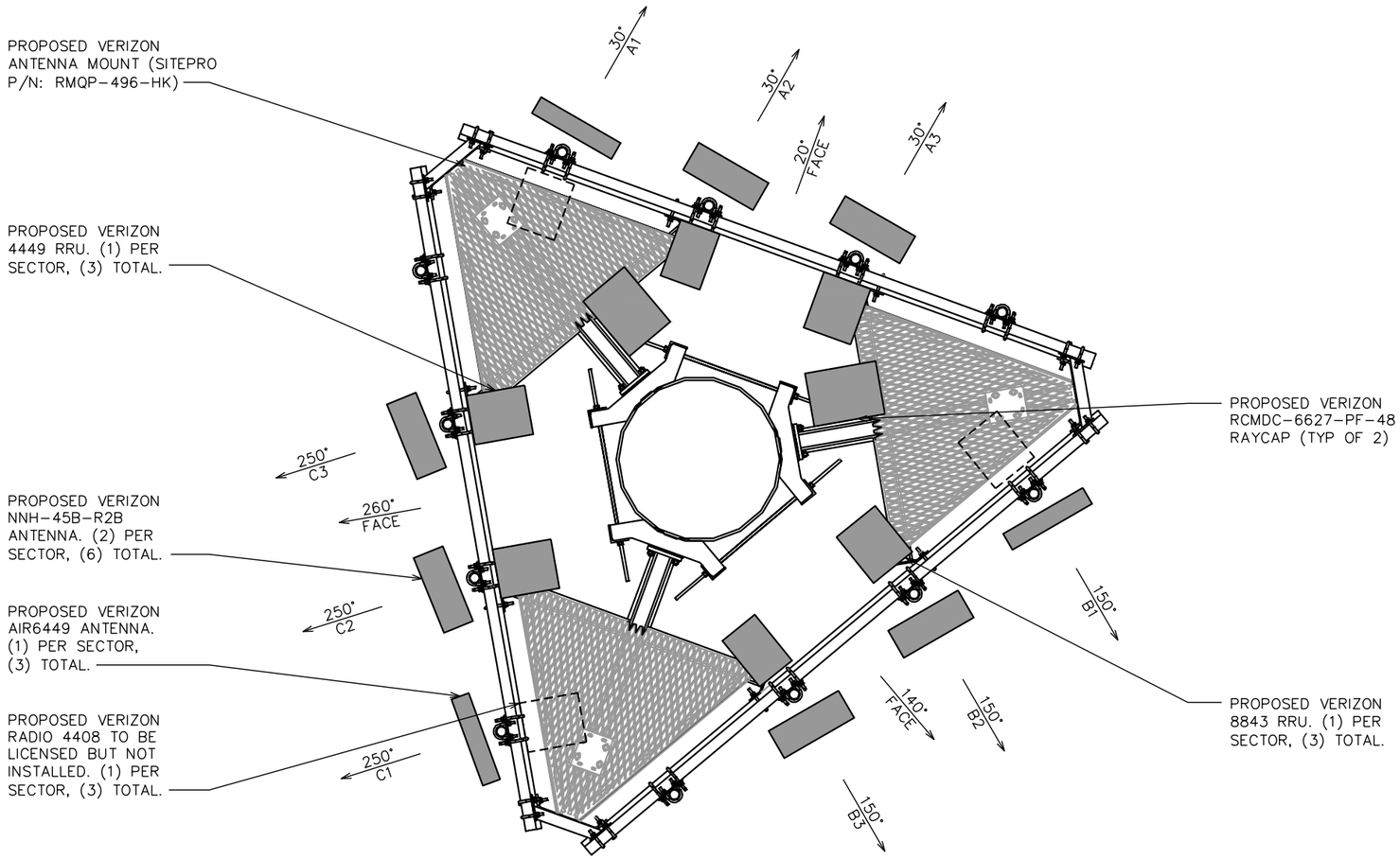
SHEET NUMBER: **C-3**

REVISION: **6**

TEP#:26351 6.598297

NOTES:

1. TEP DID NOT ANALYZE ANTENNA MOUNT TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR ANY VERIZON LOADING.
2. SEE SHEET C-3B SHEET FOR PROPOSED ANTENNA SCHEDULE.
3. CONTRACTOR TO VERIFY PROPOSED LOADING WITH TOWER STRUCTURAL ANALYSIS PRIOR TO CONSTRUCTION.
4. ASSUMED 4" ANTENNA STAND OFF FROM MOUNT PIPE. CONTRACTOR TO VERIFY NO ANTENNA INTERFERENCE OCCURS WITH PROPOSED CONFIGURATION SHOWN. ROTATE MOUNTS AS NEEDED.



PROPOSED VERIZON ANTENNA PLAN

SCALE: 3/8" = 1'-0"

0 2 4
SCALE IN FEET

TRUE NORTH

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
TEP OPCO, LLC
5399

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 38401
SCOTT BRANTLEY
January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

PROPOSED VERIZON ANTENNA PLAN

SHEET NUMBER: **C-3A**

REVISION: 6

TEP#:263516.598297

GENERAL NOTES:

1. THE ANTENNA ORIENTATION PLAN IS A SCHEMATIC. THE CONTRACTOR SHALL VERIFY TOWER ORIENTATION AND FIELD COORDINATE REQUIRED ADJUSTMENTS TO ACHIEVE THE DESIRED ANTENNA AZIMUTHS.
2. ANTENNA CENTERLINE HEIGHT BASED ON TOP OF FINISHED GRADE.
3. ALL ANTENNAS, CABLES AND MOUNTS SHALL BE INSTALLED IN ACCORDANCE WITH THE STRUCTURAL ENGINEER'S RECOMMENDATIONS IN A MANNER CONSISTENT WITH THE STRUCTURAL ANALYSIS REPORT.
4. ALL INFORMATION THIS SHEET TO BE CONFIRMED WITH VERIZON RF DESIGN PRIOR TO INSTALLATION.
5. TEP DID NOT PERFORM A STRUCTURAL ANALYSIS ON THE MOUNT OR THE TOWER. IT IS THE CARRIER'S RESPONSIBILITY TO ENSURE MOUNT AND TOWER CAN SUPPORT PROPOSED LOADS.

PROPOSED VERIZON ANTENNA/CABLE SCHEDULE

ANTENNA POSITION	AZIMUTH IN DEGREES	MECH. DOWN TILT	ELEC. DOWN TILT	LICENSED FREQUENCY	ANTENNA (QTY) MAKE/MODEL	EQUIPMENT	COMPOSITION CABLES			
							LENGTH	COAX QTY	COAX SIZE	TOTAL HYBRID
A1	30°	–	–	CBRS	ERICSSON AIR6449	(1) 4408 RRU*	230'±	–	–	(2) 1-5/8"
A2	30°	0°	2°	700	COMMSCOPE NHH-45B-R2B	(1) 4449 RRU	230'±	–	–	
				850				–	–	
				850 5G				–	–	
A3	30°	0°	0°	AWS	COMMSCOPE NHH-45B-R2B	(1) 8843 RRU	230'±	–	–	
				AWS3				–	–	
				1900				–	–	
B1	150°	–	–	CBRS	ERICSSON AIR6449	(1) 4408 RRU*	230'±	–	–	
B2	150°	0°	2°	700	COMMSCOPE NHH-45B-R2B	(1) 4449 RRU	230'±	–	–	
				850				–	–	
				850 5G				–	–	
B3	150°	0°	0°	AWS	COMMSCOPE NHH-45B-R2B	(1) 8843 RRU	230'±	–	–	
				AWS3				–	–	
				1900				–	–	
C1	250°	–	–	CBRS	ERICSSON AIR6449	(1) 4408 RRU*	230'±	–	–	
C2	250°	0°	2°	700	COMMSCOPE NHH-45B-R2B	(1) 4449 RRU	230'±	–	–	
				850				–	–	
				850 5G				–	–	
C3	250°	0°	0°	AWS	COMMSCOPE NHH-45B-R2B	(1) 8843 RRU	230'±	–	–	
				AWS3				–	–	
				1900				–	–	

* EQUIPMENT TO BE LEASED BUT NOT INSTALLED

PROPOSED VERIZON ANTENNA/CABLE SCHEDULE

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 38402
SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

PROPOSED VERIZON ANTENNA/CABLE SCHEDULE

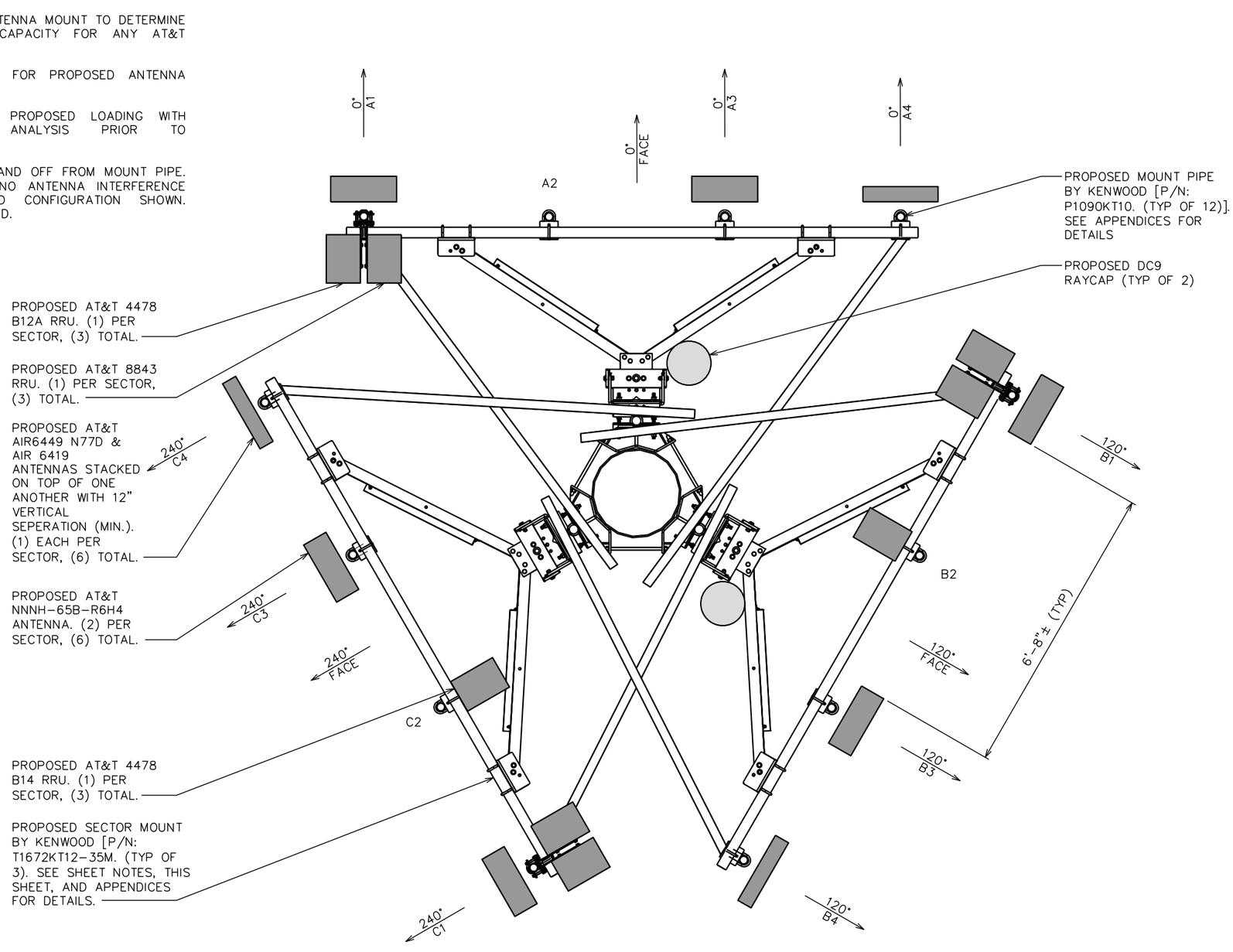
SHEET NUMBER: **C-3B**

REVISION: **6**

TEP#:263516.598297

NOTES:

1. TEP DID NOT ANALYZE ANTENNA MOUNT TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR ANY AT&T LOADING.
2. SEE SHEET C-3B SHEET FOR PROPOSED ANTENNA SCHEDULE.
3. CONTRACTOR TO VERIFY PROPOSED LOADING WITH TOWER STRUCTURAL ANALYSIS PRIOR TO CONSTRUCTION.
4. ASSUMED 4" ANTENNA STAND OFF FROM MOUNT PIPE. CONTRACTOR TO VERIFY NO ANTENNA INTERFERENCE OCCURS WITH PROPOSED CONFIGURATION SHOWN. ROTATE MOUNTS AS NEEDED.



PROPOSED AT&T ANTENNA PLAN

SCALE: 3/8" = 1'-0"

0 2 4

SCALE IN FEET

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 38401
SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

PROPOSED AT&T ANTENNA PLAN

SHEET NUMBER: **C-3C**

REVISION: 6

TEP#:263516.598297

GENERAL NOTES:

1. THIS ANTENNA ORIENTATION PLAN IS A SCHEMATIC. THE CONTRACTOR SHALL VERIFY TOWER ORIENTATION AND FIELD COORDINATE REQUIRED ADJUSTMENTS TO ACHIEVE THE DESIRED ANTENNA AZIMUTHS.
2. ANTENNA CENTERLINE HEIGHT BASED ON TOP OF FOOTING ELEVATION.
3. ALL ANTENNAS, CABLES AND MOUNTS SHALL BE INSTALLED IN ACCORDANCE WITH THE STRUCTURAL ENGINEER'S RECOMMENDATIONS IN A MANNER CONSISTENT WITH THE STRUCTURAL ANALYSIS REPORT.
4. ALL ANTENNA BRACKETS PER ANTENNA MANUFACTURER, OR EQUAL. CONTRACTOR TO COORDINATE REQUIRED MECHANICAL DOWN TILT WITH AT&T.
5. ALL ANTENNA INFORMATION TO BE CONFIRMED WITH AT&T RF DESIGN PRIOR TO INSTALLATION.
6. TEP DID NOT PERFORM A STRUCTURAL ANALYSIS ON THE MOUNT OR THE TOWER. IT IS THE CARRIER'S RESPONSIBILITY TO ENSURE MOUNT AND TOWER CAN SUPPORT ADDITIONAL LOADS.
7. CABLE LENGTH TAKEN FROM AT&T RFDS. CONTRACTOR TO VERIFY LENGTH PRIOR TO ORDERING MATERIALS.

PROPOSED AT&T ANTENNA/CABLE SCHEDULE

ANT. MARK	SECTOR	TECH.	STATUS	MANUFACTURER/ MODEL #	DIMS (HxWxD)	AZIMUTH (TN)	RAD CENTER	ELEC. D-TILT	COAX/ CABLE	CABLE LENGTH	SURGE PROTECTION	RRU MODEL
A1	ALPHA	LTE 700 LTE 1900 LTE AWS	PROPOSED	COMMSCOPE NNH4-65B-R6H4	H 72.0" W 19.6" D 7.8"	0°	190'	4° 2° 2°	(2) FIBER$_{24}$ (6) DC POWER 0.92"ø	240'±	(1) DC9-48-60-24-8C-EV	(1) 4478 B12A (1) 8843 B2/B66A
A3	ALPHA	LTS 700	PROPOSED	COMMSCOPE NNH4-65B-R6H4	H 72.0" W 19.6" D 7.8"	0°	190'	4°	–	240'±	–	(1) 4478 B14
A4	ALPHA	5G CBAND	PROPOSED	AIR6449 N77D	H 30.4" W 15.9" D 8.1"	0°	190'	2°	–	240'±	–	–
		5G DOD	PROPOSED	AIR6419 N77G	H 30.0" W 15.7" D 6.7"	0°	190'	2°	–	240'±	–	–
B1	BETA	LTE 700 LTE 1900 LTE AWS	PROPOSED	COMMSCOPE NNH4-65B-R6H4	H 72.0" W 19.6" D 7.8"	120°	190'	4° 2° 2°	–	240'±	(1) DC9-48-60-24-8C-EV	(1) 4478 B12A (1) 8843 B2/B66A
B3	BETA	LTS 700	PROPOSED	COMMSCOPE NNH4-65B-R6H4	H 72.0" W 19.6" D 7.8"	120°	190'	4°	–	240'±	–	(1) 4478 B14
B4	BETA	5G CBAND	PROPOSED	AIR6449 N77D	H 30.4" W 15.9" D 8.1"	120°	190'	2°	–	240'±	–	–
		5G DOD	PROPOSED	AIR6419 N77G	H 30.0" W 15.7" D 6.7"	120°	190'	2°	–	240'±	–	–
C1	GAMMA	LTE 700 LTE 1900 LTE AWS	PROPOSED	COMMSCOPE NNH4-65B-R6H4	H 72.0" W 19.6" D 7.8"	240°	190'	4° 2° 2°	–	240'±	–	(1) 4478 B12A (1) 8843 B2/B66A
C3	GAMMA	LTS 700	PROPOSED	COMMSCOPE NNH4-65B-R6H4	H 72.0" W 19.6" D 7.8"	240°	190'	4°	–	240'±	–	(1) 4478 B14
C4	GAMMA	5G CBAND	PROPOSED	AIR6449 N77D	H 30.4" W 15.9" D 8.1"	240°	190'	2°	–	240'±	–	–
		5G DOD	PROPOSED	AIR6419 N77G	H 30.0" W 15.7" D 6.7"	240°	190'	2°	–	240'±	–	–

PROPOSED AT&T ANTENNA/CABLE SCHEDULE

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA
PROFESSIONAL
No. 38407
ENGINEER
SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

PROPOSED AT&T ANTENNA/CABLE SCHEDULE

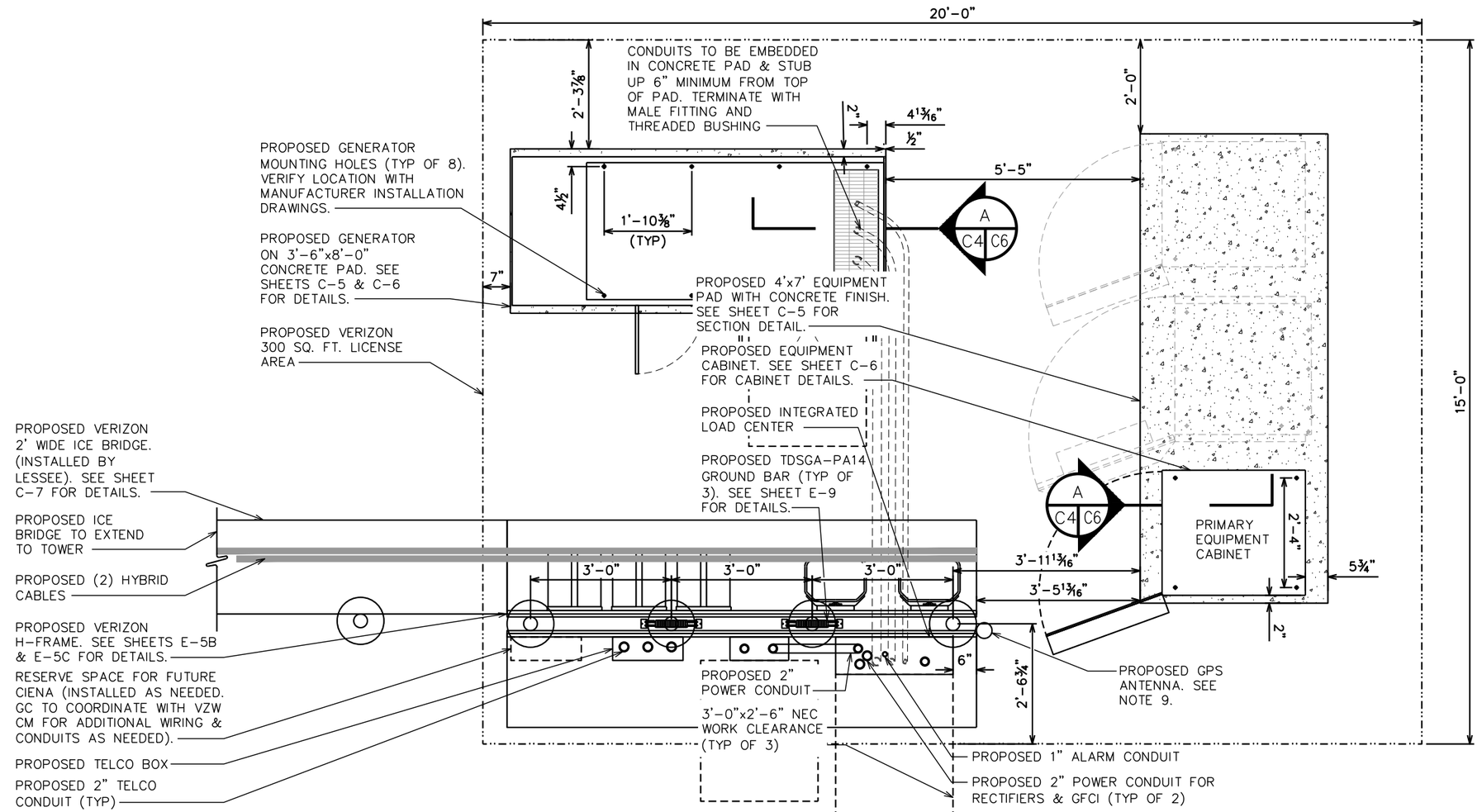
SHEET NUMBER: **C-3D**

REVISION: 6

TEP#263516.598297

ROUTING NOTES:

1. REFER TO THE SITE PLAN FOR EQUIPMENT PAD LOCATIONS AND ORIENTATION.
2. RUN 2" FLEX TELCO CONDUIT FROM BOTTOM OF TELCO BOX TO SIDE OF RF CABINET WITH CHASE NIPPLE THROUGH FACTORY KNOCKOUT.
3. RUN (2) 2" FLEX POWER CONDUIT FROM BOTTOM OF ILC TO SIDE OF RF CABINET WITH CHASE NIPPLES THROUGH FACTORY KNOCKOUTS.
4. RUN 2" FLEX FIBER CONDUIT FROM BOTTOM OF OVP TO SIDE OF RF CABINET WITH CHASE NIPPLE THROUGH FACTORY KNOCKOUT.
5. RUN (1) 1-1/2" FLEX POWER CONDUIT FOR EVERY (6) RRU CIRCUITS FROM BOTTOM OF OVP TO SIDE OF RF CABINET WITH CHASE NIPPLE THROUGH FACTORY KNOCKOUT.
6. SUPPORT FLEX CONDUIT ON HORIZONTAL H-FRAME RAILS OR ON VERTICAL SITE STRUT SNT10 RAILS ADDED TO H-FRAME FOR CONDUIT/CABLE MANAGEMENT.
7. RUN HYBRID CABLE FOR TOWER MOUNTED RRU'S OVERHEAD ON TRAPEZE SUSPENDED FROM WAVE GUIDE BRIDGE. SWEEP DOWN ONTO H-FRAME RAILS, THEN LOOP UNDER OVP AND CONNECT TO BOTTOM OF OVP. ATTACH GROUND KITS TO HYBRID CABLE BEFORE LOOPING UNDER OVP, AND BOND TO TDSGA GROUND BAR AT BASE OF H-FRAME.
8. RUN COAX CABLE FOR GROUND MOUNTED RRU'S (IF USED) OVERHEAD ON TRAPEZE SUSPENDED FROM WAVE GUIDE BRIDGE. TERMINATE COAX ON ICE BRIDGE AND TRANSITION TO JUMPERS JUST BEFORE REACHING H-FRAME. ATTACH GROUND KITS TO COAX CABLE ON TOWER SIDE OF LAST ICE BRIDGE POST AND BOND TO TDSGA GROUND BAR NEAR TOP OF POST.
9. GPS ANTENNA TO BE MOUNTED TO STANDARD HEIGHT POST WITH EXTENDED MOUNTING PIPE, USING COMMSCOPE GPS-U MOUNTING KIT. MOUNT AS NEAR AS AS PRACTICAL TO RBA84 CABINET.
10. BOLT CABINETS TO SLAB USING ½"x3¾" KWIK BOLT BY HILTI OR APPROVED EQUIVALENT.
11. BOLT GENERATOR TO SLAB PER MANUFACTURERS SPECIFICATIONS.



VERIZON EQUIPMENT LAYOUT

SCALE: ⅜" = 1'-0"

0 2 4
SCALE IN FEET

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
TEP OPCO, LLC
5399

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 38403
SCOTT BRANTLEY
January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

VERIZON EQUIPMENT LAYOUT

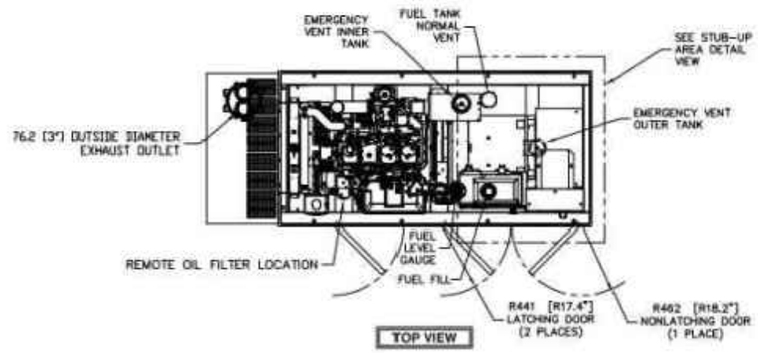
SHEET NUMBER: **C-4**

REVISION: **6**

TEP#263516.598297

NOTES:

1. 50kW INDUSTRIAL DIESEL GENERATOR BY GENERAC. CONTRACTOR TO VERIFY DIMENSIONS WITH MANUFACTURER.
2. ANCHOR GENERATOR FUEL TANK TO CONCRETE PAD PER MANUFACTURER'S SPECIFICATION.
3. BASE TANK SIZE SHALL BE 203 GALLON. CONTRACTOR TO VERIFY SIZE WITH CONSTRUCTION MANAGER BEFORE ORDERING OR INSTALLING THE GENERATOR.

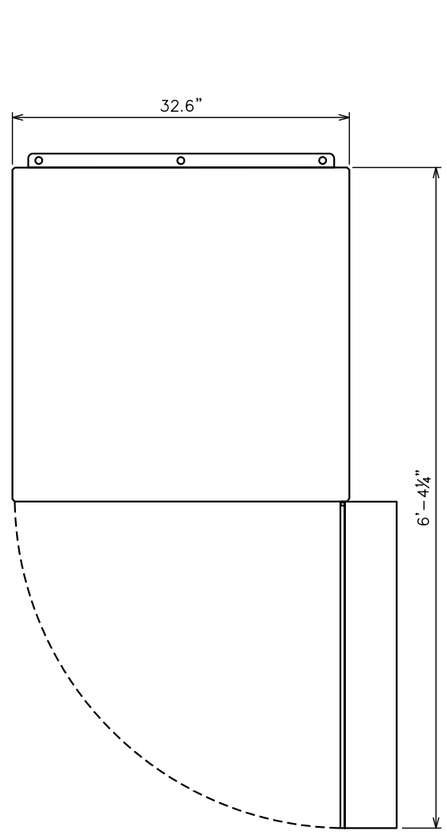


VERIZON GENERATOR DETAILS

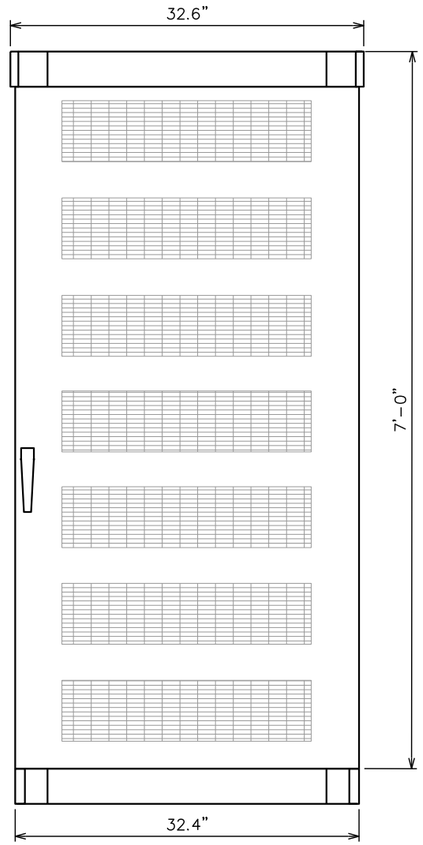
SCALE: N.T.S.

NOTES:

1. MOUNT USING ½"x3¾" KWIK BOLT 3 BY HILTI OR APPROVED EQUIVALENT.
2. DIMENSIONS SHOWN INCLUDE OUTDOOR ENCLOSURE.
3. CABINET WILL BE MOUNTED ON A 12" PLINTH FOR A TOTAL HEIGHT OF 8'-0".



PLAN VIEW



FRONT VIEW

RBA84 DETAILS

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION TEP OPCO, LLC 5399

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER SCOTT BRANTLEY No. 28401

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

VERIZON GENERATOR & EQUIPMENT CABINET DETAILS

SHEET NUMBER: **C-5**

REVISION: 6

TEP#:263516.598297

FOUNDATION NOTES

1. FOUNDATION DESIGN BASED ON 2,000 PSF SOIL BEARING CAPACITY.
2. CONCRETE SHALL BE MIN. 4,000 PSI AFTER 28 DAYS.
3. REINFORCING STEEL Fy = 60,000 PSI
4. ALL BACKFILL SHALL BE THOROUGHLY COMPACTED TO A MINIMUM OF 95% DENSITY USING THE MODIFIED PROCTOR METHOD.
5. SURFACE OF FINISHED SLAB SHALL BE LEVEL AND FLAT WITHIN 1/4".
6. CONTRACTOR SHALL VERIFY WITH MANUFACTURER ACTUAL DIMENSIONS OF CABINET PRIOR TO LAYING OUT FOUNDATION.
7. MAXIMUM SIZE OF CONCRETE AGGREGATE SHALL NOT EXCEED 1 INCH; SIZE SUITABLE FOR INSTALLATION METHOD UTILIZED; OR ONE-THIRD CLEAR DISTANCE BEHIND OR BETWEEN REINFORCING.
8. REINFORCEMENT SHALL BE DEFORMED AND CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60 UNLESS OTHERWISE NOTED.
9. WELDING IS PROHIBITED ON REINFORCING STEEL AND EMBEDMENTS.
10. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE 3 INCHES UNLESS OTHERWISE NOTED.
11. CONCRETE COVER FROM TOP OF FOUNDATION TO ENDS OF VERTICAL REINFORCEMENT SHALL BE 3 INCHES MINIMUM.
12. FOUNDATION DESIGN ASSUMES FIELD INSPECTIONS WILL BE PERFORMED TO VERIFY THAT CONSTRUCTION MATERIALS, INSTALLATION METHODS, AND ASSUMED DESIGN PARAMETERS ARE ACCEPTABLE BASED ON CONDITIONS EXISTING AT THE SITE.
13. FOUNDATION DESIGN ASSUMED CONTINUOUS CONCRETE PLACEMENT WITHOUT CONSTRUCTION JOINTS.
14. WELDED WIRE FABRIC SHALL BE SUPPLIED IN FLAT SHEETS. (NOT ROLLED).
15. TEST CYLINDERS SHALL BE MOLDED AND LABORATORY CURED IN ACCORDANCE WITH ASTM C31. THREE CYLINDERS SHALL BE TAKEN FRO EACH DAY'S CONCRETE PLACEMENT. CYLINDERS SHALL BE TESTED IN ACCORDANCE WITH ASTM C39.
16. TOPS OF CONCRETE FOUNDATION MUST BE WITHIN 0.02" OF ELEVATION SPECIFIED BY THE CUSTOMER.

GENERAL STRUCTURAL NOTES

SPECIFICATIONS / CODES:

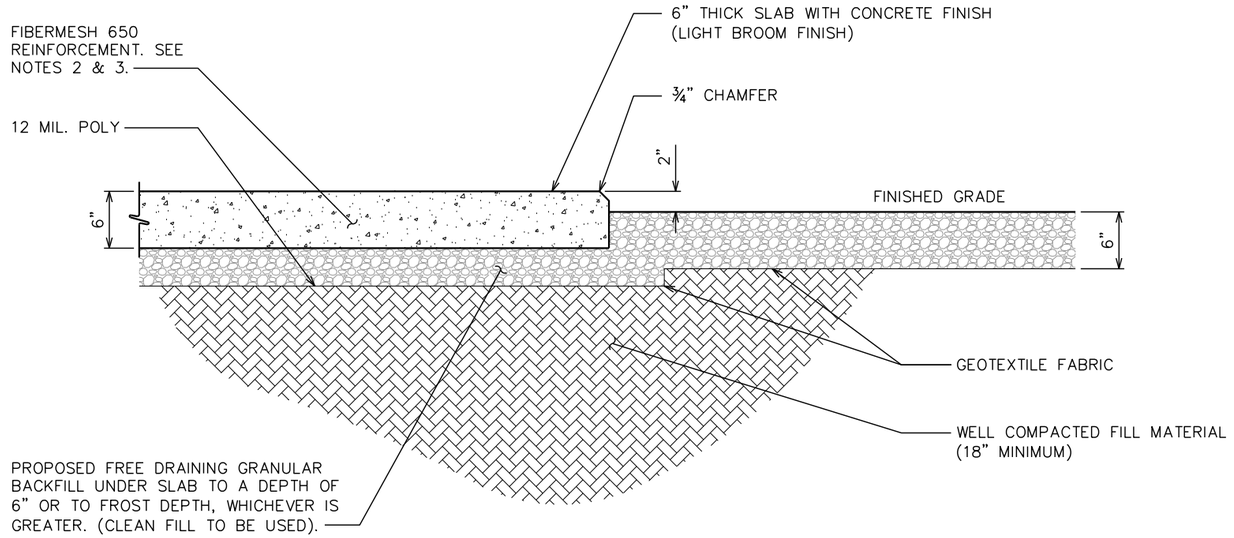
1. ALL CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE ACI CODE.
2. REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI). "MANUAL OF STANDARD PRACTICE".

VERIZON FOUNDATION NOTES

SCALE: N.T.S.

NOTES:

1. FROST DEPTH FOR THE CITY OF GREENVILLE IS 12 INCHES.
2. APPLICATION RATE OF FIBERS SHALL BE DETERMINED BY THE READY MIX CONCRETE SUPPLIER.
3. THE CONCRETE SUPPLIER SHALL FOLLOW ALL MANUFACTURERS RECOMMENDATIONS FOR FIBERMESH APPLICATION INCLUDING THE MINIMUM APPLICATION RATE OF 3 LBS/YD^3.



VERIZON EQUIPMENT FOUNDATION SECTION VIEW

SCALE: N.T.S.

A C4 C6

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION TEP OPCO, LLC 5399

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 38401 SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

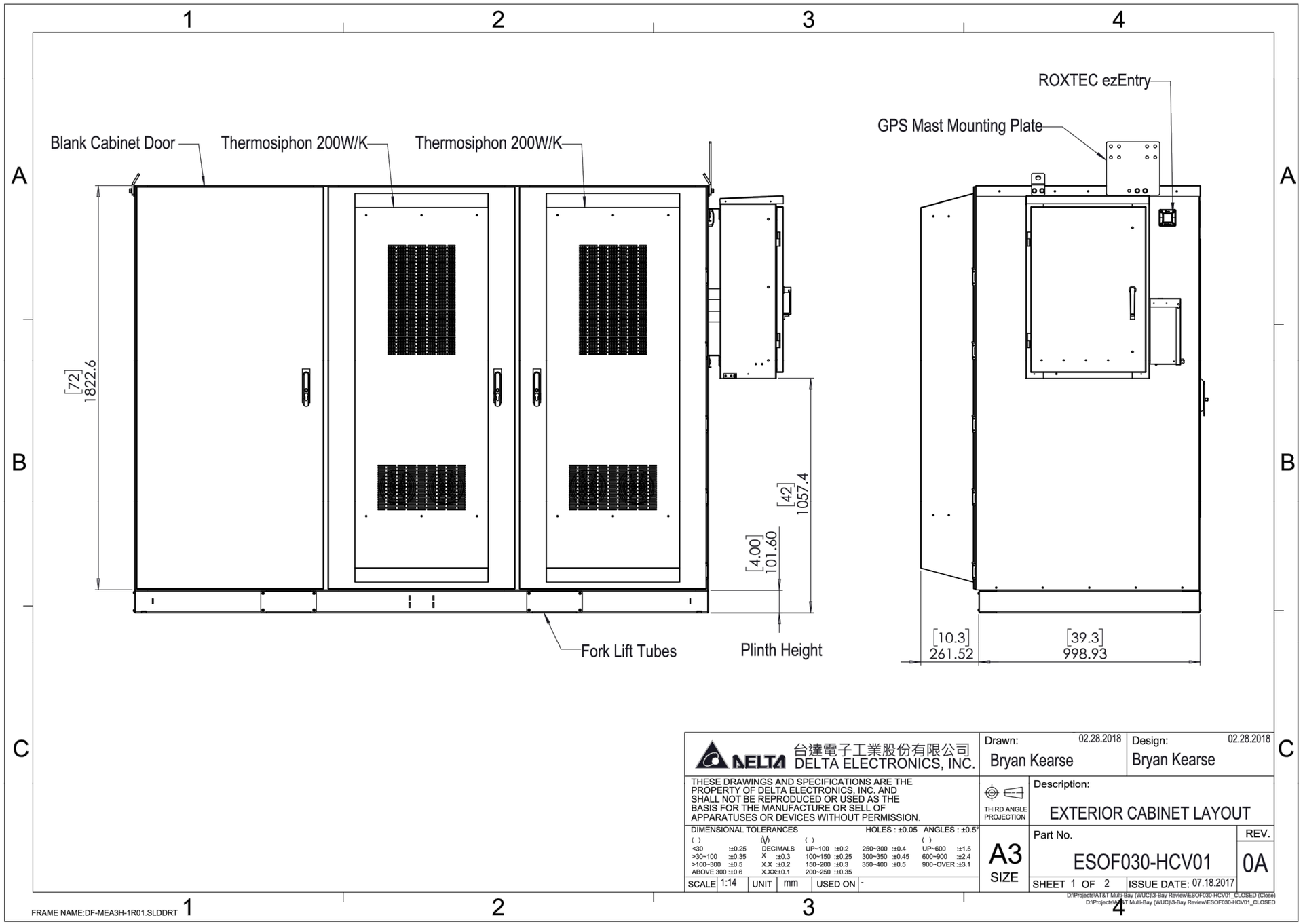
SHEET TITLE:

VERIZON FOUNDATION NOTES & DETAILS

SHEET NUMBER: **C-6**

REVISION: 6

TEP#:263516.598297



台達電子工業股份有限公司
DELTA ELECTRONICS, INC.

DIMENSIONAL TOLERANCES — HOLES : ±0.05 ANGLES : ±0.5°

( )		(V)		( )				( )	
<30	±0.25	DECIMALS		UP~100	±0.2	250~300	±0.4	UP~600	±1.5
>30~100	±0.35	X	±0.3	100~150	±0.25	300~350	±0.45	600~900	±2.4
>100~300	±0.5	X.X	±0.2	150~200	±0.3	350~400	±0.5	900~OVER	±3.1
ABOVE 300	±0.6	X.XX	±0.1	200~250	±0.35				

SCALE 1:14 | UNIT mm | USED ON -

THIRD ANGLE PROJECTION

A3 SIZE

Drawn: 02.28.2018 Bryan Kearse

Design: 02.28.2018 Bryan Kearse

Description: EXTERIOR CABINET LAYOUT

Part No. ESOF030-HCV01

REV. 0A

SHEET 1 OF 2 | ISSUE DATE: 07.18.2017

D:\Projects\AT&T Multi-Bay (WUC)\3-Bay Review\ESOF030-HCV01_CLOSED (Close)
D:\Projects\AT&T Multi-Bay (WUC)\3-Bay Review\ESOF030-HCV01_CLOSED

FRAME NAME:DF-MEA3H-1R01.SLDDRT

AT&T EXTERIOR CABINET LAYOUT

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
TEP OPCO, LLC
5399

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 38[illegible]
SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

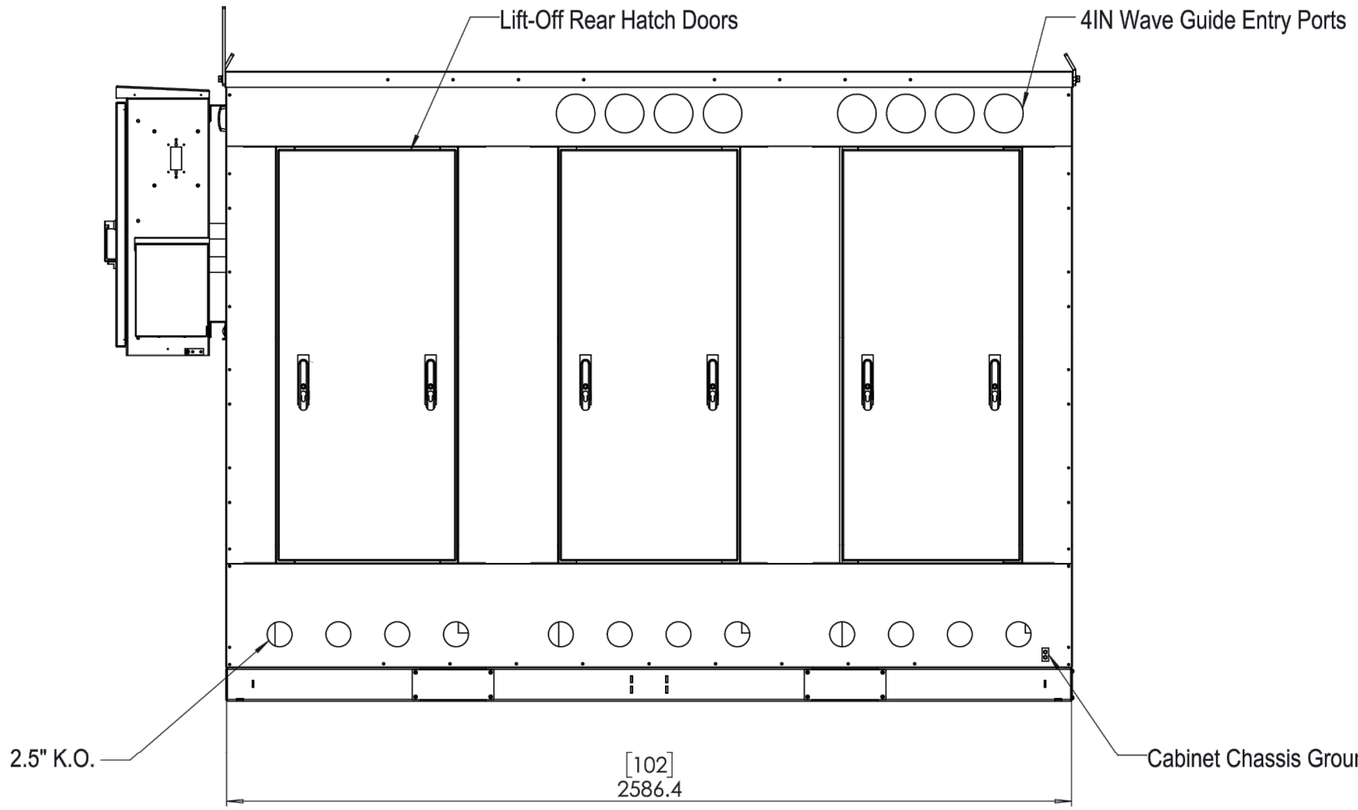
SHEET TITLE:

AT&T WUC DETAILS I

SHEET NUMBER: **C-7**

REVISION: **6**

TEP#:263516.598297



台達電子工業股份有限公司
DELTA ELECTRONICS, INC.

Drawn: 02.28.2018	Design: 02.28.2018
Bryan Kearse	Bryan Kearse

DIMENSIONAL TOLERANCES — HOLES : ±0.05 ANGLES : ±0.5°

( )		(V)		( )				( )	
<30	±0.25	DECIMALS		UP~100	±0.2	250~300	±0.4	UP~600	±1.5
>30~100	±0.35	X	±0.3	100~150	±0.25	300~350	±0.45	600~900	±2.4
>100~300	±0.5	X.X	±0.2	150~200	±0.3	350~400	±0.5	900~OVER	±3.1
ABOVE 300	±0.6	X.XX	±0.1	200~250	±0.35				

THIRD ANGLE PROJECTION

Description: EXTERIOR CABINET LAYOUT

SCALE	1:14	UNIT	mm	USED ON	-

A3 SIZE

Part No. ESOF030-HCV01 REV. 0A

SHEET 2 OF 2 ISSUE DATE: 07.18.2017

D:\Projects\AT&T Multi-Bay (WUC)\3-Bay Review\ESOF030-HCV01_CLOSED (Close)
D:\Projects\AT&T Multi-Bay (WUC)\3-Bay Review\ESOF030-HCV01_CLOSED

FRAME NAME:DF-MEA3H-1R01.SLDDRT

AT&T EXTERIOR CABINET LAYOUT

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA — TEP OPCO, LLC 5399 — CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 38401 — SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

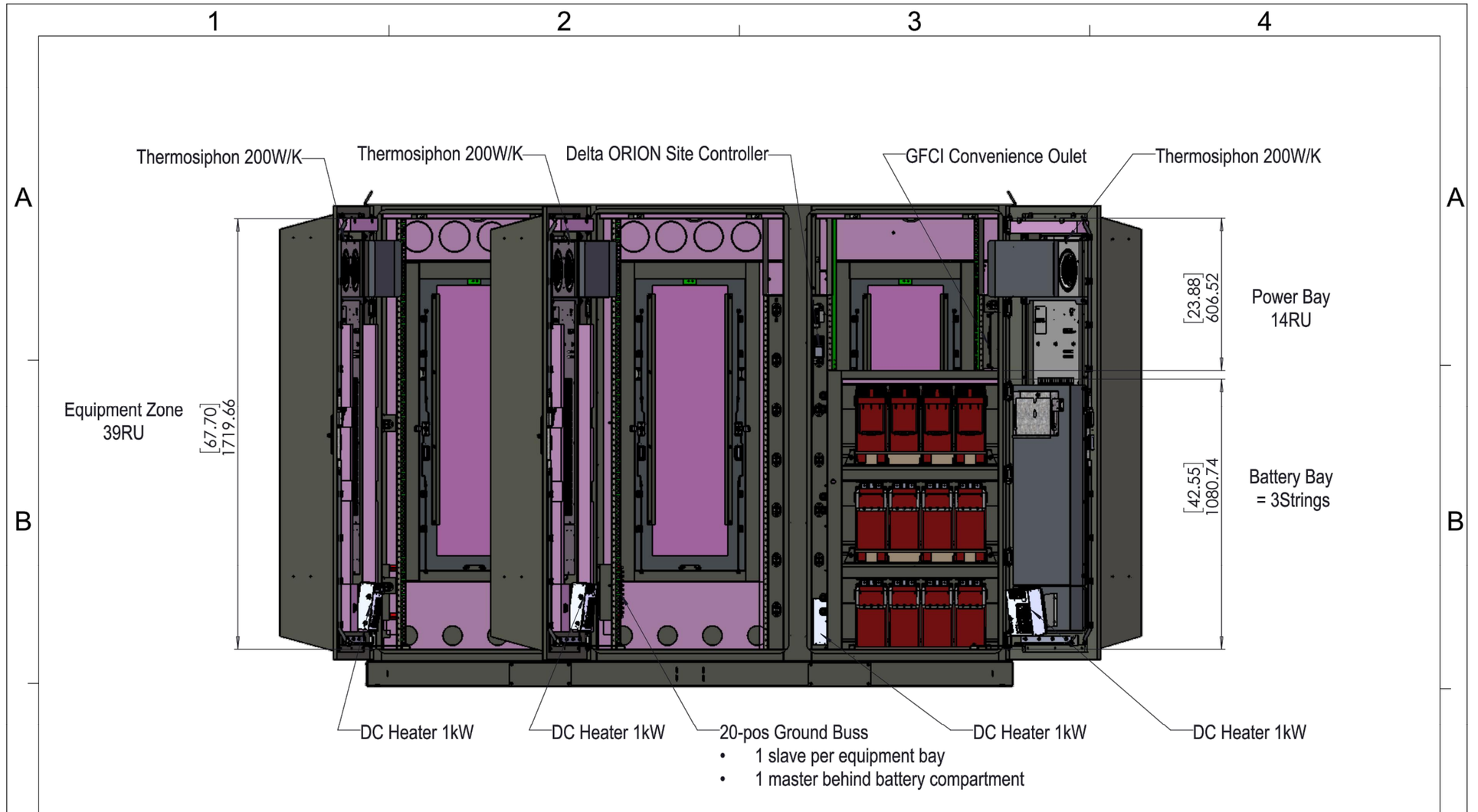
SHEET TITLE:

AT&T WUC DETAILS II

SHEET NUMBER: **C-7A**

REVISION: 6

TEP#:26351 6.598297



台達電子工業股份有限公司
DELTA ELECTRONICS, INC.

Drawn: 02.28.2018	Design: 02.28.2018
Bryan Kearse	Bryan Kearse

THIRD ANGLE PROJECTION

Description: CABINET LAYOUT

DIMENSIONAL TOLERANCES — HOLES : ±0.05 ANGLES : ±0.5°

( )		(√)		( )		( )	
<30	±0.25	DECIMALS		UP~100	±0.2	250~300	±0.4	UP~600	±1.5
>30~100	±0.35	X	±0.3	100~150	±0.25	300~350	±0.45	600~900	±2.4
>100~300	±0.5	X.X	±0.2	150~200	±0.3	350~400	±0.5	900~OVER	±3.1
ABOVE 300	±0.6	X.XX	±0.1	200~250	±0.35				

A3 SIZE

Part No. ESOF030-HCV01 REV. 0A

SCALE	1:14	UNIT	mm	USED ON	-

SHEET 1 OF 2 ISSUE DATE: 07.18.2017

D:\Projects\AT&T Multi-Bay (WUC)\3-Bay Review\ESOF030-HCV01 (Close)
D:\Projects\AT&T Multi-Bay (WUC)\3-Bay Review\ESOF030-HCV01

FRAME NAME:DF-MEA3H-1R01.SLDDRT

AT&T CABINET LAYOUT

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA — TEP OPCO, LLC 5399 — CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER — No. 32401 — SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

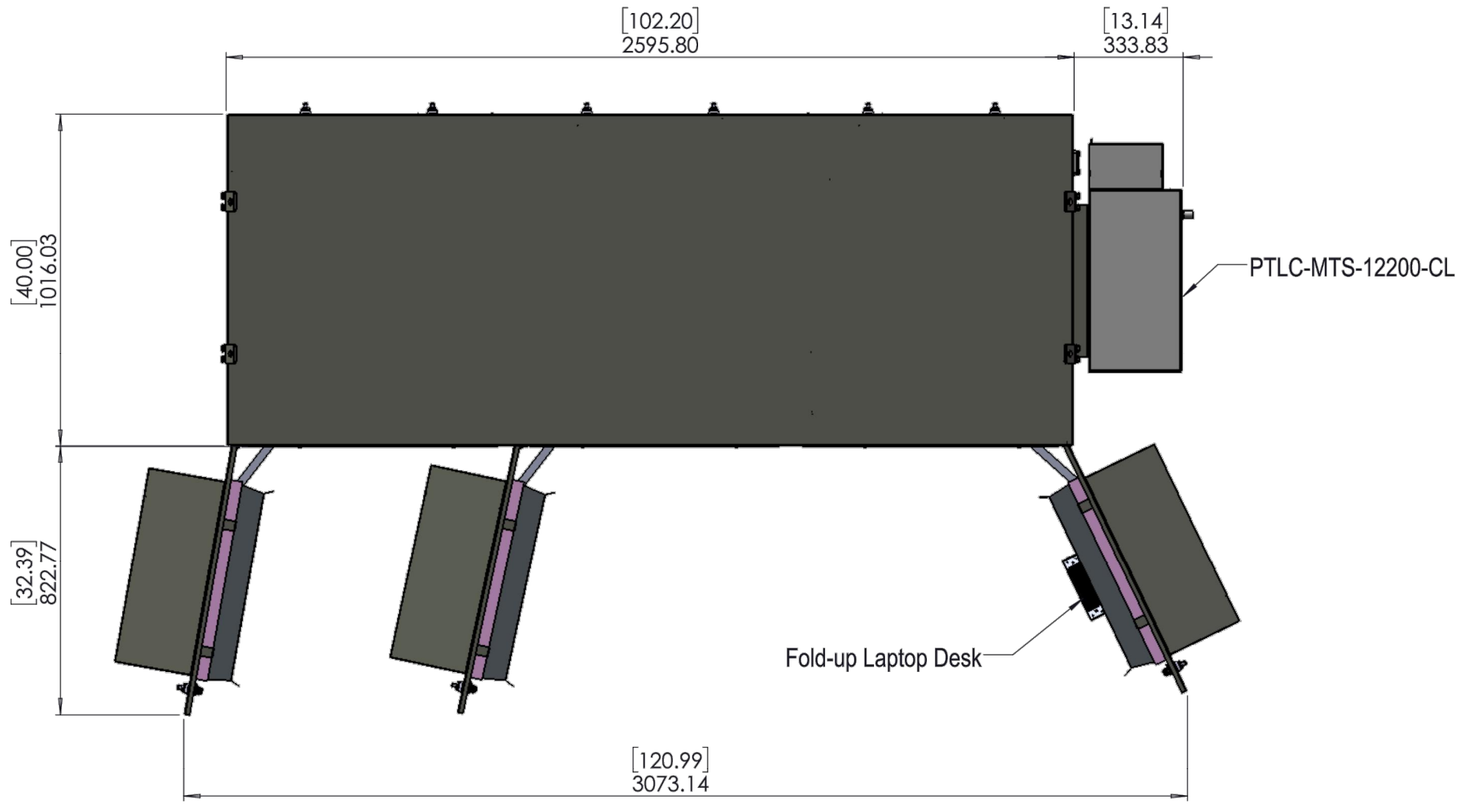
SHEET TITLE:

AT&T WUC DETAILS III

SHEET NUMBER: **C-7B**

REVISION: 6

TEP#263516.598297



台達電子工業股份有限公司 DELTA ELECTRONICS, INC.		Drawn: 02.28.2018 Bryan Kearse	Design: 02.28.2018 Bryan Kearse
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF DELTA ELECTRONICS, INC. AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SELL OF APPARATUSES OR DEVICES WITHOUT PERMISSION.	THIRD ANGLE PROJECTION	Description: FOOTPRINT w/DOOR SWING	
DIMENSIONAL TOLERANCES HOLES : ±0.05 ANGLES : ±0.5° ( ) <30 ±0.25 >30~100 ±0.35 >100~300 ±0.5 ABOVE 300 ±0.6 |V| DECIMALS X ±0.3 X.X ±0.2 X.XX±0.1 ( ) UP~100 ±0.2 100~150 ±0.25 150~200 ±0.3 200~250 ±0.35 250~300 ±0.4 300~350 ±0.45 350~400 ±0.5 ( ) UP~600 ±1.5 600~900 ±2.4 900~OVER ±3.1	A3 SIZE	Part No. ESOF030-HCV01	REV. 0A
SCALE 1:14 UNIT mm USED ON -		SHEET 2 OF 2	ISSUE DATE: 07.18.2017

D:\Projects\AT&T Multi-Bay (WUC)\3-Bay Review\ESOF030-HCV01 (Close)
D:\Projects\AT&T Multi-Bay (WUC)\3-Bay Review\ESOF030-HCV01

FRAME NAME:DF-MEA3H-1R01.SLDDRT

AT&T CABINET FOOTPRINT

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 38401
SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

AT&T WUC DETAILS IV

SHEET NUMBER: **C-7C**

REVISION: 6

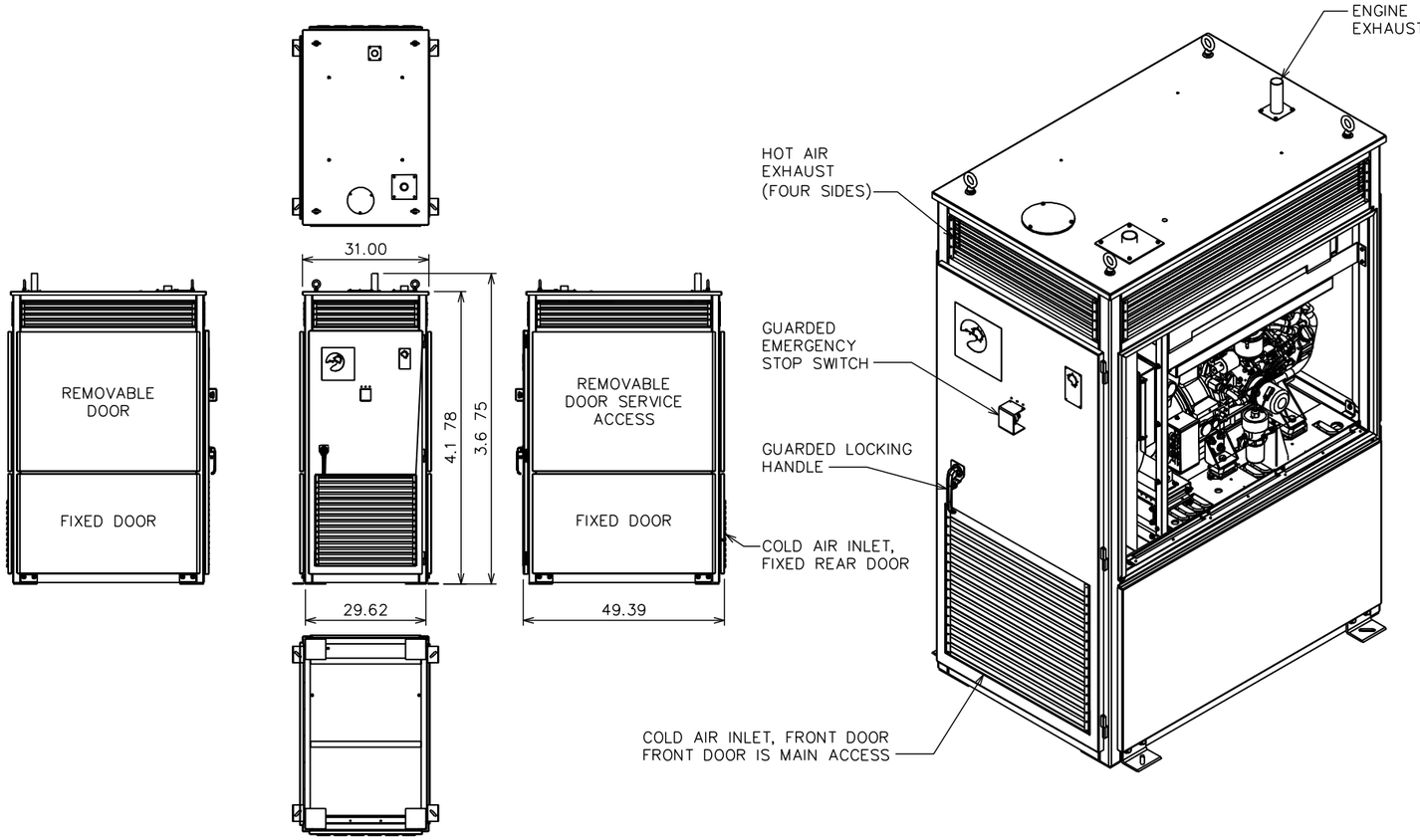
TEP#:263516.598297

NOTE:

THESE PLACARDS ARE REQUIRED TO BE INSTALLED ON PROPOSED GENERATOR FREE OF ANY OBSTRUCTION AS TO BE CLEARLY VISIBLE WITHIN COMPOUND

PROPOSED AT&T GENERATOR SIGNAGE

SCALE: N.T.S.



AT&T GENERATOR SPECIFICATIONS

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA
PROFESSIONAL
No. 38401
ENGINEER
SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

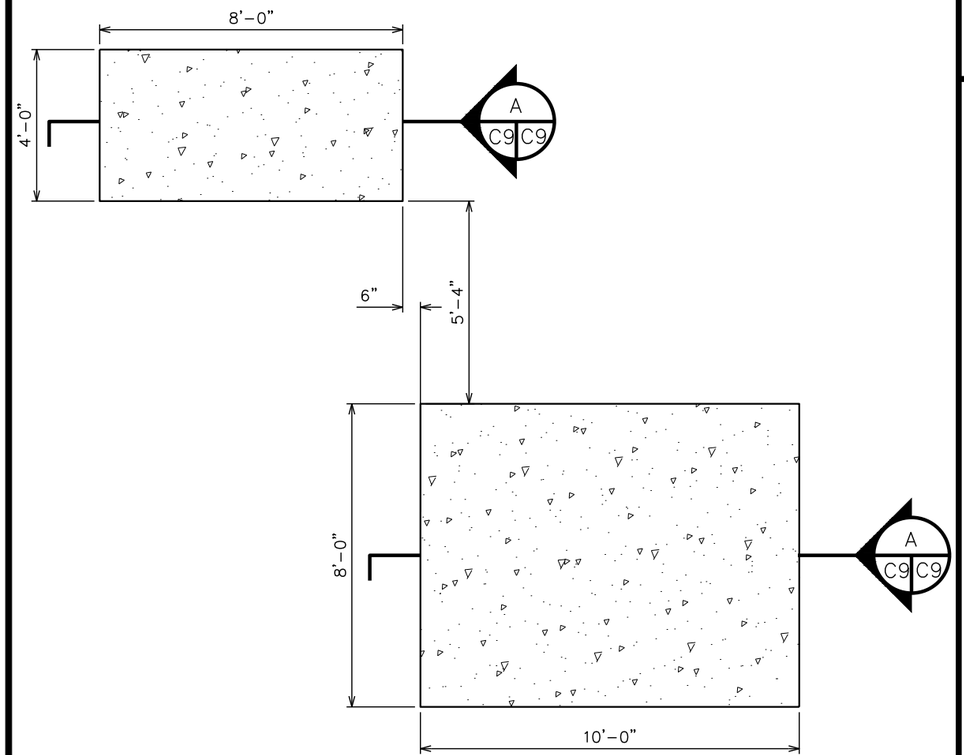
SHEET TITLE:

AT&T GENERATOR SPECIFICATIONS

SHEET NUMBER: **C-8**

REVISION: **6**

TEP#:263516.598297



AT&T FOUNDATION PLAN

SCALE: ¼" = 1'-0"

0 4 8

SCALE IN FEET

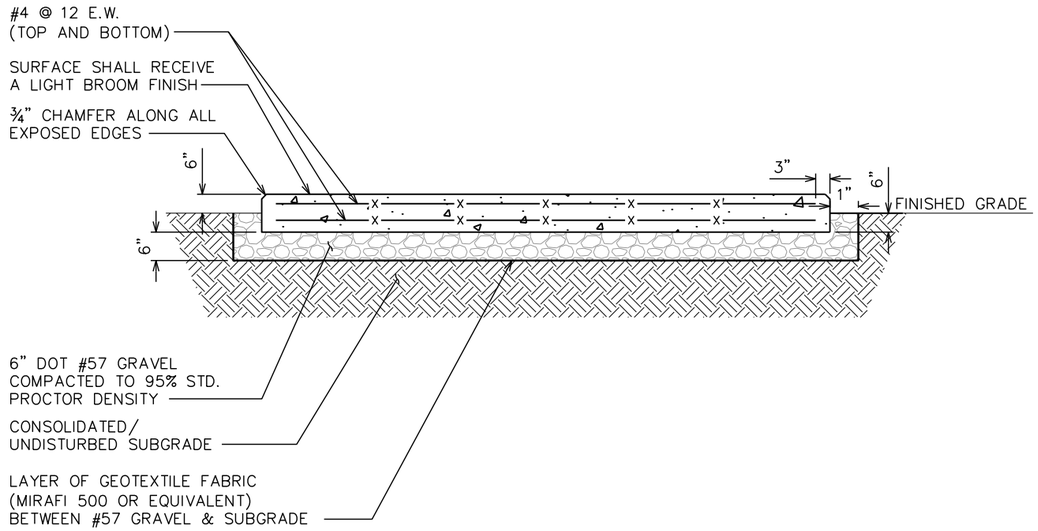
GENERAL STRUCTURAL NOTES:

SPECIFICATION/CODES:

1. CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE ACI CODE.
2. REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICE".
3. DESIGN SHALL BE PER NORTH CAROLINA BUILDING CODE, 2018 EDITION.

FOUNDATION NOTES:

1. FOUNDATION DESIGN BASED ON 2000 PSF SOIL BEARING CAPACITY. IF OTHER CONDITIONS EXIST, FOUNDATION SHALL BE REDESIGNED. CONTRACTOR SHALL HAVE SOIL BEARING CAPACITY VERIFIED BY A LICENSED PROFESSIONAL GEOTECHNICAL ENGINEER PRIOR TO INITIATION OF CONSTRUCTION ACTIVITIES.
2. CONCRETE SHALL BE 4,000 PSI.
3. REBAR Fy = 60,000 PSI.
4. ALL BACKFILL SHALL BE THOROUGHLY COMPACTED TO A MINIMUM OF 95% DENSITY USING THE MODIFIED PROCTOR METHOD.



PAD SECTION

SCALE: ⅜" = 1'-0"

A C6 C6

0 2 4

SCALE IN FEET

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
SCOTT BRANTLEY
Lic. No. 38401

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

AT&T CABINET FOUNDATION DETAILS I

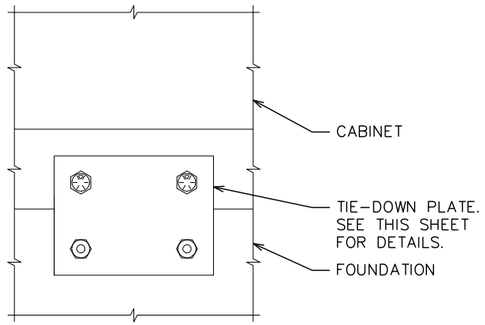
SHEET NUMBER: **C-9**

REVISION: **6**

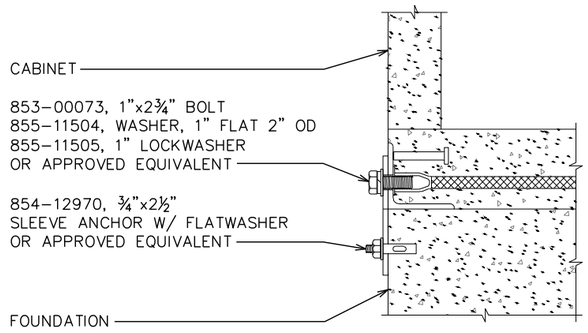
TEP#26351 6.598297

TIE-DOWN NOTE:

CABINET AND GENERATOR TIE-DOWNS TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS



FRONT VIEW



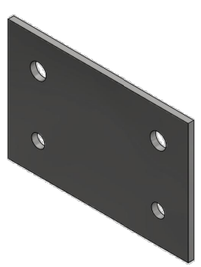
SIDE VIEW

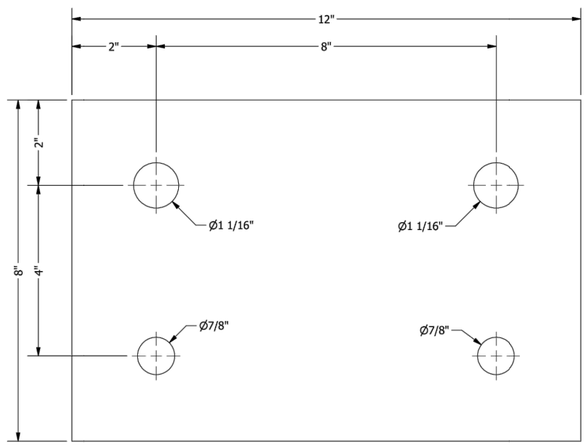
TYPICAL CABINET TIE-DOWN DETAIL

SCALE: N.T.S.

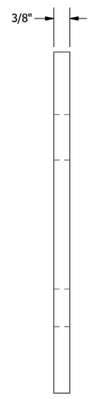
PART LIST							
ITEM	QTY	U/M	P/N	DESCRIPTION	Length	Width	PCS
1	1	FT	141038	FLATBAR,3/8"X8",GRADE 36'	12.000		1

NOTES:
1. PART TO BE HOT DIPPED GALVANIZED PER ASTM A123.
2. PART NUMBER TO BE STAMPED ON PART.





FRONT VIEW
SCALE 1:2



SIDE VIEW
SCALE 1:2

CELLXION CABINET TIE-DOWN PLATE DETAIL

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 38401
SCOTT BRANTLEY
January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

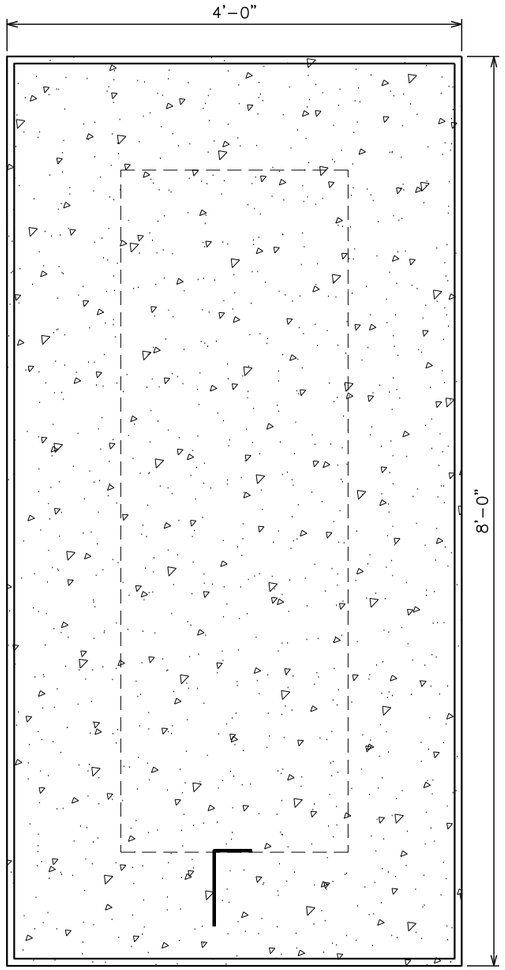
AT&T GENERATOR FOUNDATION DETAILS II

SHEET NUMBER: **C-9A**

REVISION: **6**

TEP#:263516.598297

NOTE:
SEE FOUNDATION
NOTES, SHEET C-9A

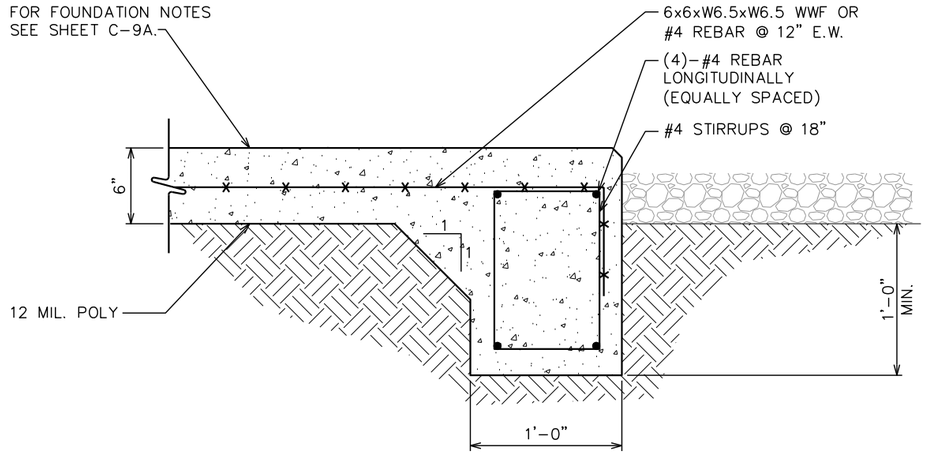


C
C-10

AT&T GENERATOR FOUNDATION PLAN

SCALE: ¾" = 1'-0"

0 1 2
SCALE IN FEET



SECTION

SCALE: 1" = 1'-0"

C
C-10

0 1 2
SCALE IN FEET

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 34040
SCOTT BRANTLEY
January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

AT&T GENERATOR FOUNDATION DETAILS

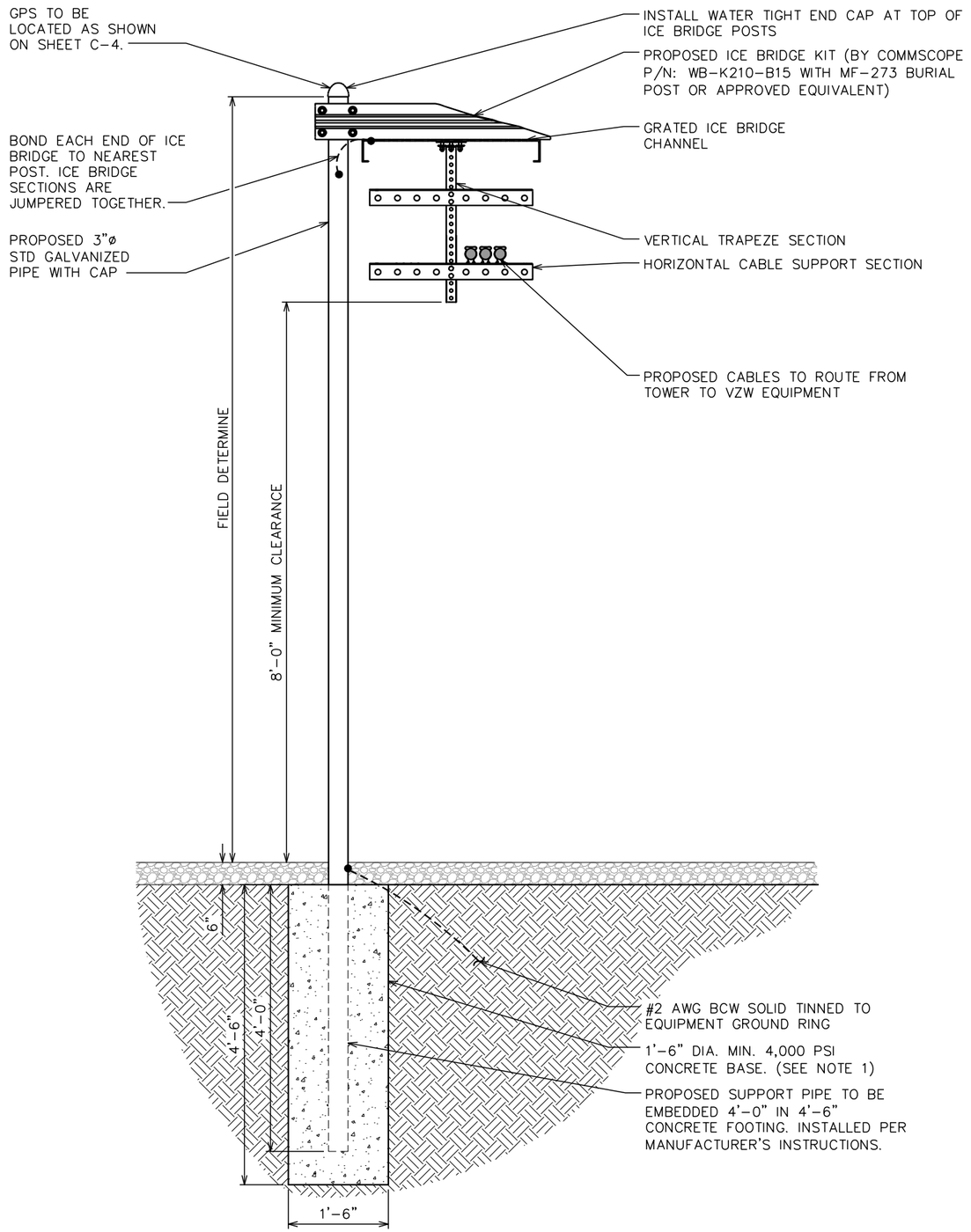
SHEET NUMBER: **C-10**

REVISION: **6**

TEP#:26351G.598297

NOTES:

1. TOP OF ICE BRIDGE POST FOUNDATION SHALL BE SET 6" BELOW TOP OF GRAVEL.
2. HEIGHT TO TOP OF ICE BRIDGE WILL BE FIELD VERIFIED, BUT WILL BE MAXIMUM 10'-10" ABOVE TOP OF GRAVEL.
3. ALL MATERIALS FURNISHED BY CONTRACTOR UNLESS OTHERWISE NOTED.



VERIZON ICE BRIDGE DETAIL

SCALE: ½" = 1'-0"

0 2 4

SCALE IN FEET

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL LICENSED ENGINEER
No. 38402
SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

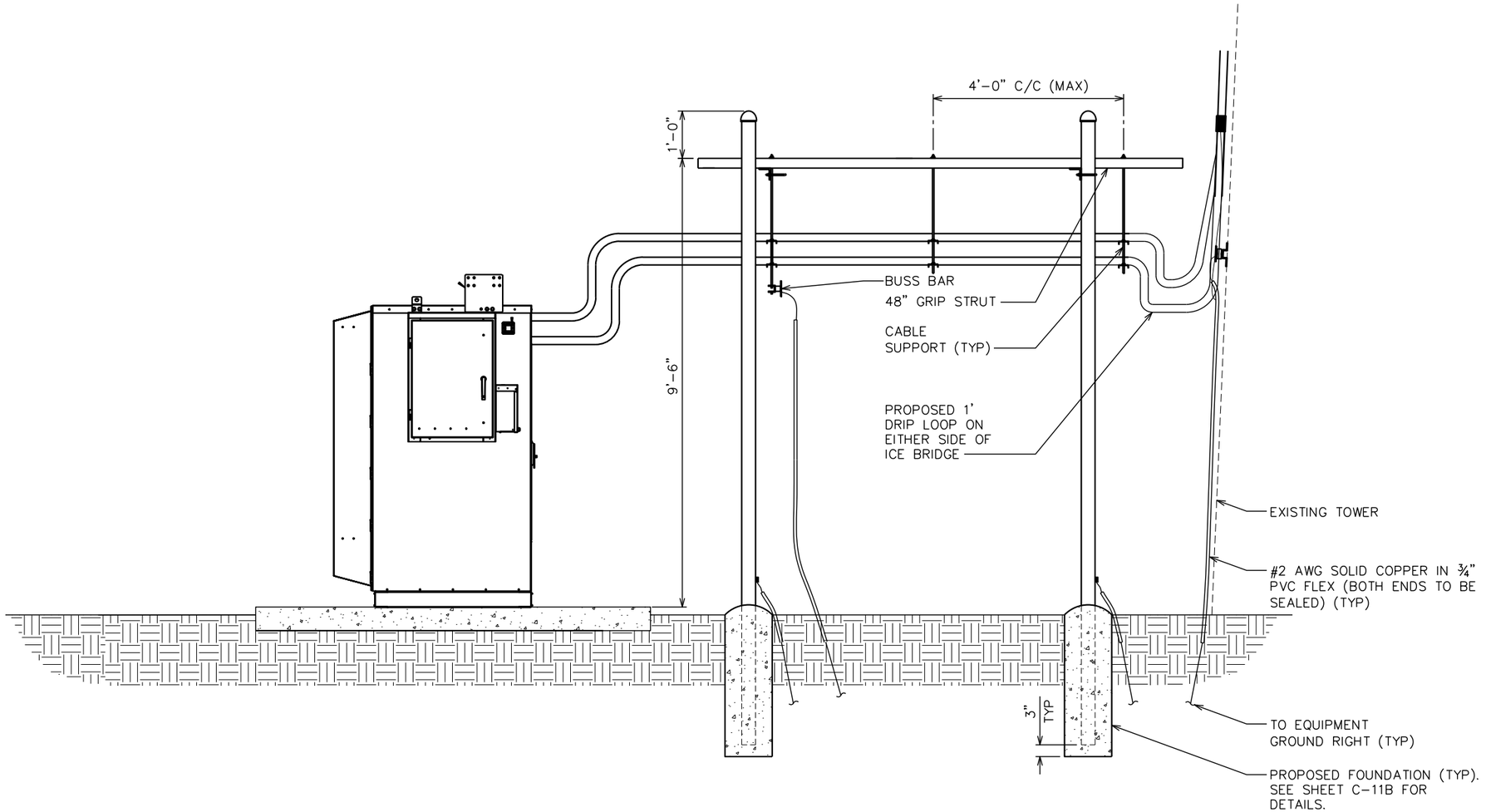
SHEET TITLE:

VERIZON ICE BRIDGE DETAIL

SHEET NUMBER: **C-11**

REVISION: **6**

TEP#:263516.598297



AT&T ICE BRIDGE DETAILS - SIDE VIEW

SCALE: ⅜" = 1'-0"

0 2 4

SCALE IN FEET

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 35401
SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

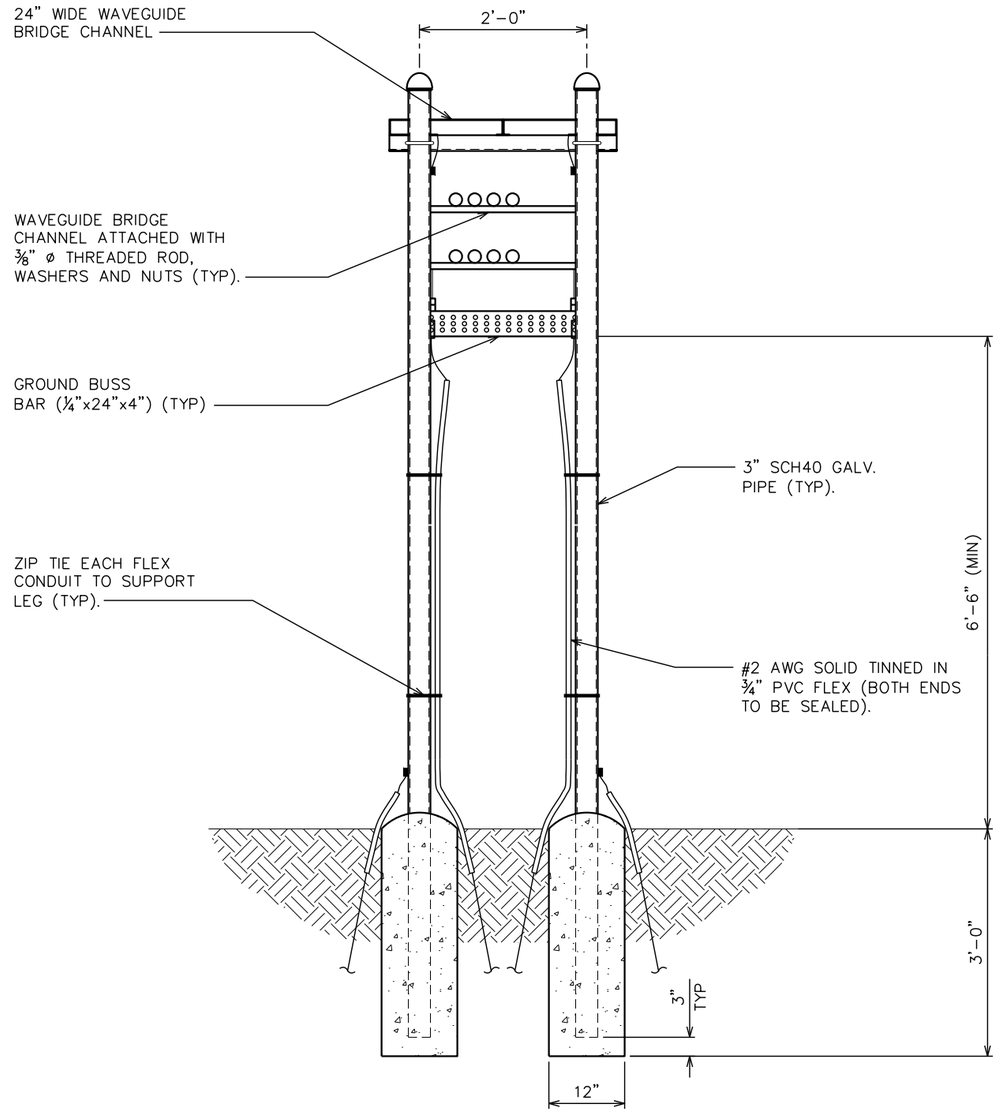
SHEET TITLE:

AT&T ICE BRIDGE DETAILS I

SHEET NUMBER: **C-11A**

REVISION: 6

TEP#:26351 6.598297



AT&T ICE BRIDGE DETAILS - FRONT VIEW

SCALE: ½" = 1'-0"

0 2 4

SCALE IN FEET

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 38401
SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

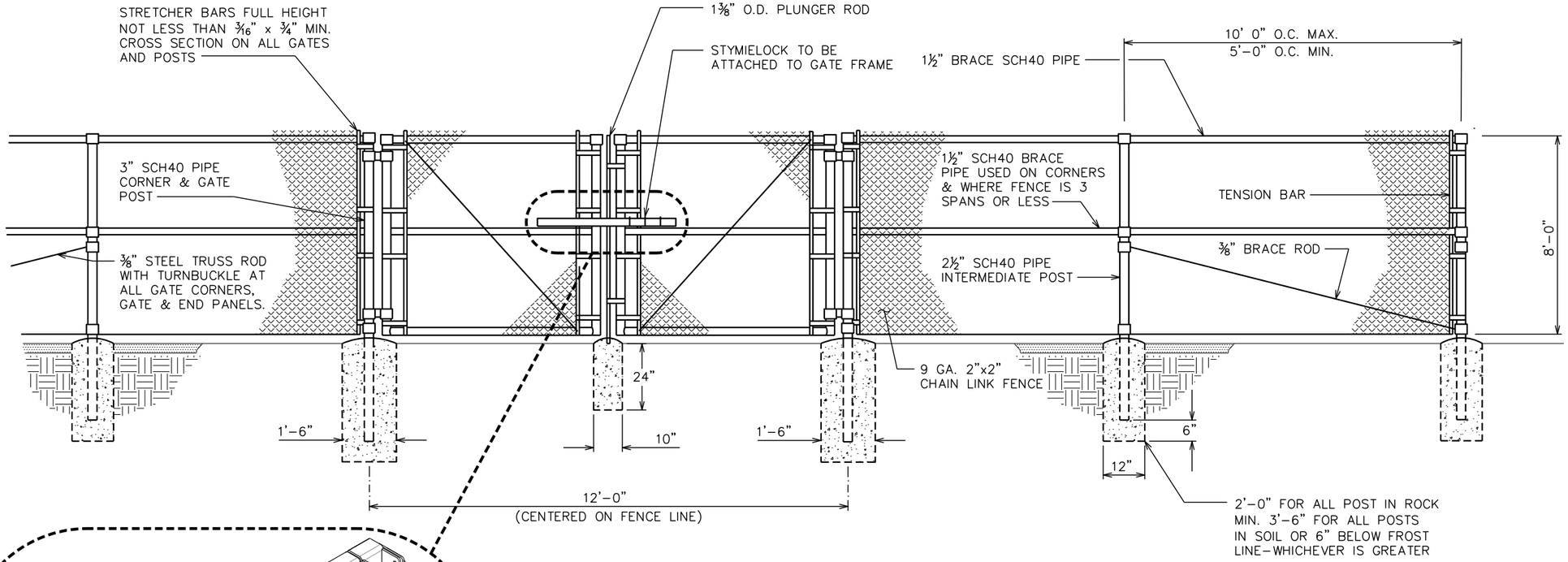
SHEET TITLE:

AT&T ICE BRIDGE DETAILS II

SHEET NUMBER: **C-11B**

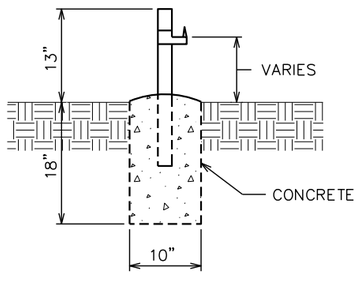
REVISION: 6

TEP#:2635 16.598297



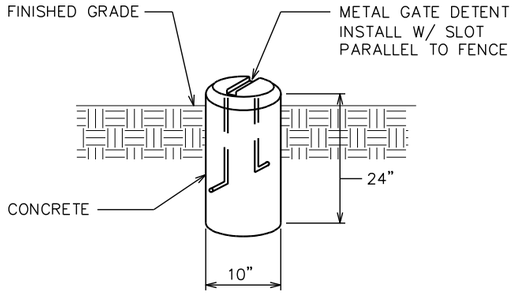
TYPICAL FENCE ELEVATION

SCALE: N.T.S.



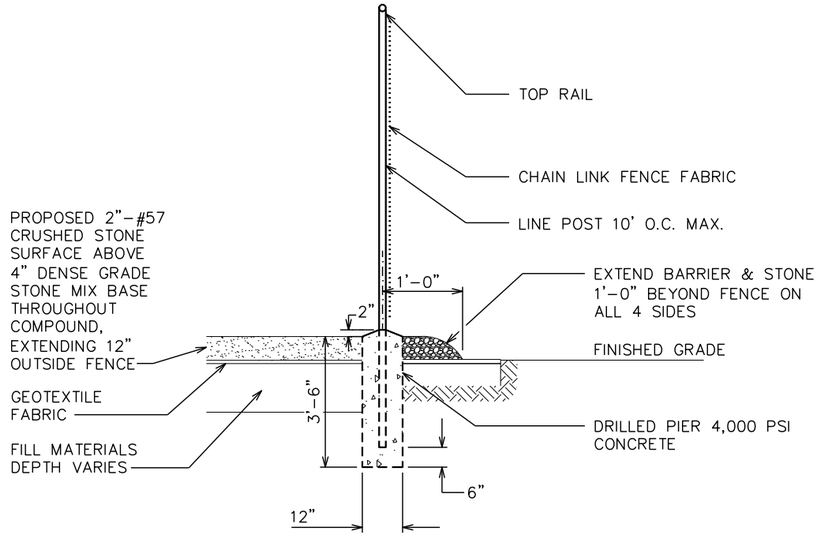
GATE STOP / KEEPER DETAIL

SCALE: N.T.S.



GATE DETENT DETAIL

SCALE: N.T.S.



FENCE DETAIL

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 34401
SCOTT BRANTLEY
February 03, 2022

REV	DATE	ISSUED FOR:
7	02-03-22	CONSTRUCTION
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

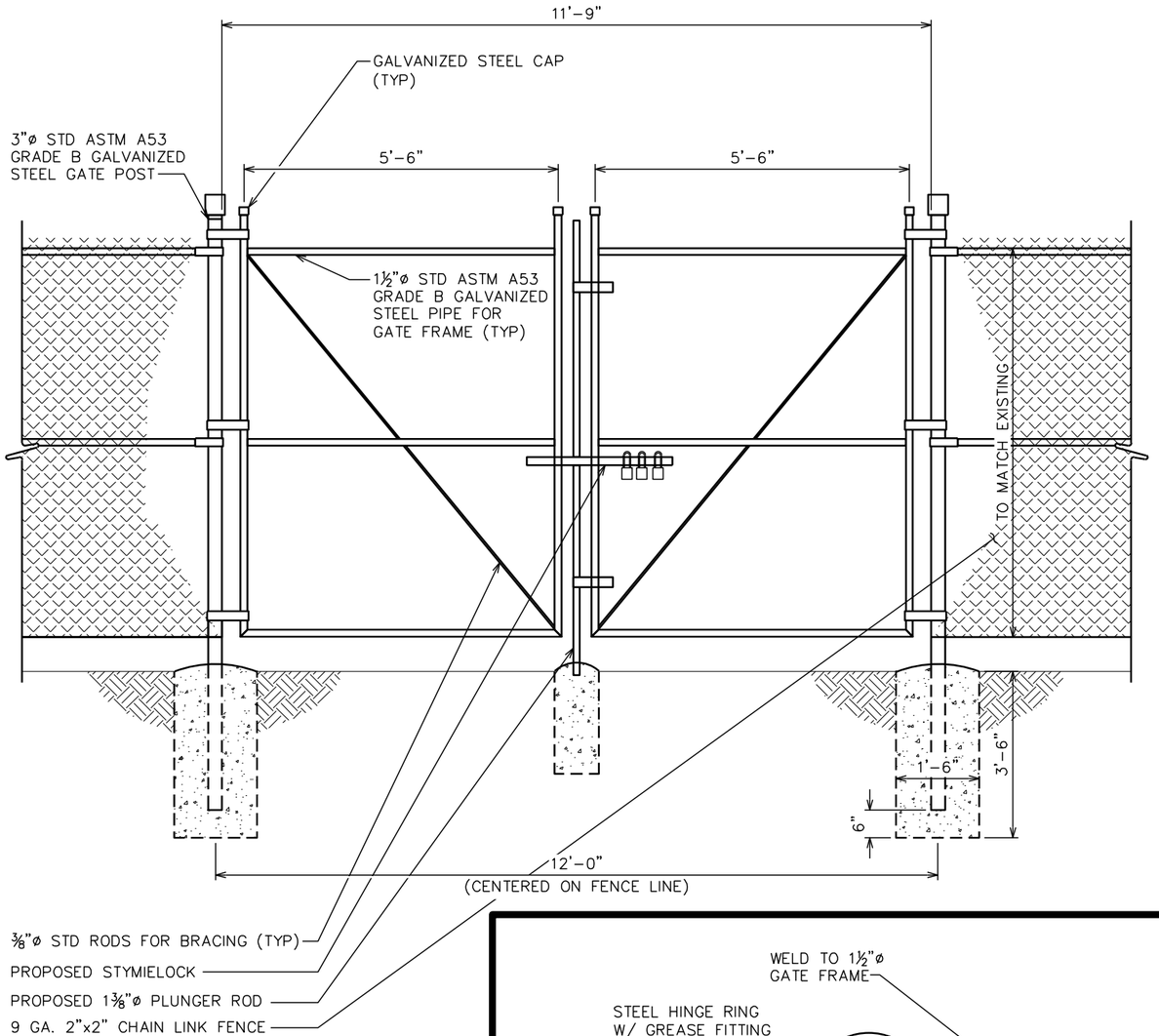
SHEET TITLE:

COMPOUND FENCE DETAILS

SHEET NUMBER: **C-12**

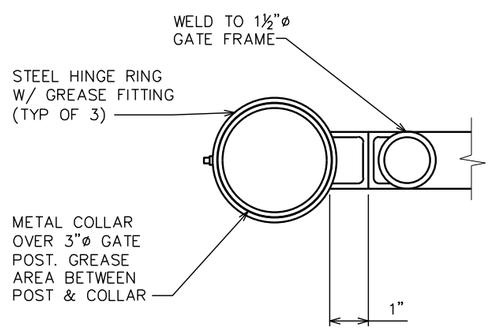
REVISION: 7

TEP#263516.598297



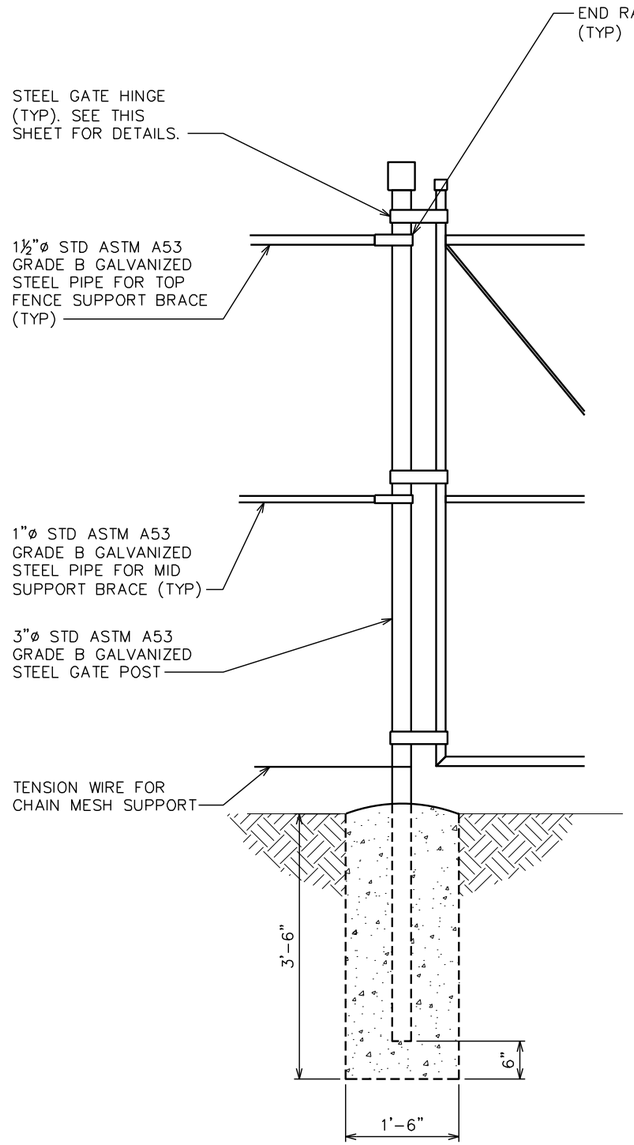
GATE ELEVATION

SCALE: N.T.S.



POST HINGE DETAIL

SCALE: N.T.S.



GATE POST DETAIL

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 38402
SCOTT BRANTLEY

February 03, 2022

REV	DATE	ISSUED FOR:
7	02-03-22	CONSTRUCTION
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

ACCESS GATE DETAIL

SHEET NUMBER: **C-12A**

REVISION: 7

TEP#263516.598297

NOTES:

1. SIGNS SHALL BE MADE OF ALUMINUM WITH 1/4" HOLES 1/2" FROM EACH CORNER TO HANG SIGNS ON FENCE.
2. SIGNS SHALL BE INSTALLED AS FOLLOWS:
   GATE: VERIZON AND FCC TOWER REGISTRATION NUMBER, NO TRESPASSING, RF WARNING SIGN
   FENCE FACING ACCESS DRIVE: E911 STREET NUMBER SIGN
3. SIGNS SHALL BE INSTALLED WITH CENTER AT 5' ABOVE FINISHED GRADE.

property of

at&t

AUTHORIZED PERSONNEL ONLY!

In case of emergency or prior to performing maintenance on this site, call 1-800-638-2822 and reference cell site number:

_____

(1) WHITE/BLUE BACKGROUND W/ BLACK LETTERING
QUANTITY: (1)
SIZE: 9"X12"
(TO BE MOUNTED ON EQUIPMENT SHELTER DOOR ADJACENT TO COMPOUND ENTRY – SEE NOTE 3)

verizon

SITE NAME: RADCLIFFE RELO
FCC#: (TBD-COORDINATE WITH OWNER)

LEASING/EMERGENCY: (704) 519-9957
WWW.VERIZONWIRELESS.COM

(2) VERIZON AND FCC REGISTRATION SIGN
SIZE: 12"X 24" (0.063" ALUMINUM)
(TO BE MOUNTED ON GATE)

(3) NO TRESPASSING SIGN
SIZE: 18"X 24"
(TO BE MOUNTED ON GATE)

(4) RF WARNING SIGN
SIZE: 18"X 12" (0.040" ALUMINUM)
(TO BE MOUNTED ON GATE)

000

(5) E911 STREET #
LETTERS MUST BE A MINIMUM 5" TALL
(TO BE MOUNTED ON THE FENCE FACING THE ACCESS DRIVE)

TYPICAL SIGNS AND SPECIFICATIONS

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 38401
SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

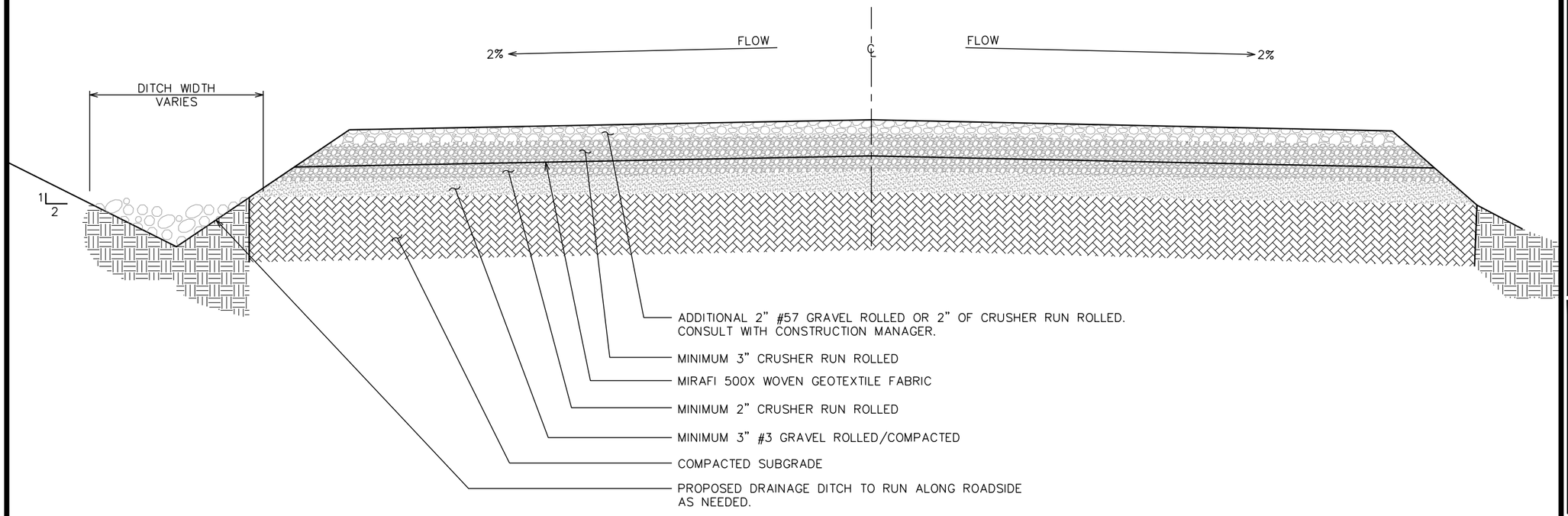
SHEET TITLE:

SIGNAGE DETAILS

SHEET NUMBER: **C-13**

REVISION: **6**

TEP#: 26316.598297



STANDARD ROAD SECTION

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 38401
SCOTT BRANTLEY
LICENSED

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

ACCESS ROAD DETAILS

SHEET NUMBER: **C-14**

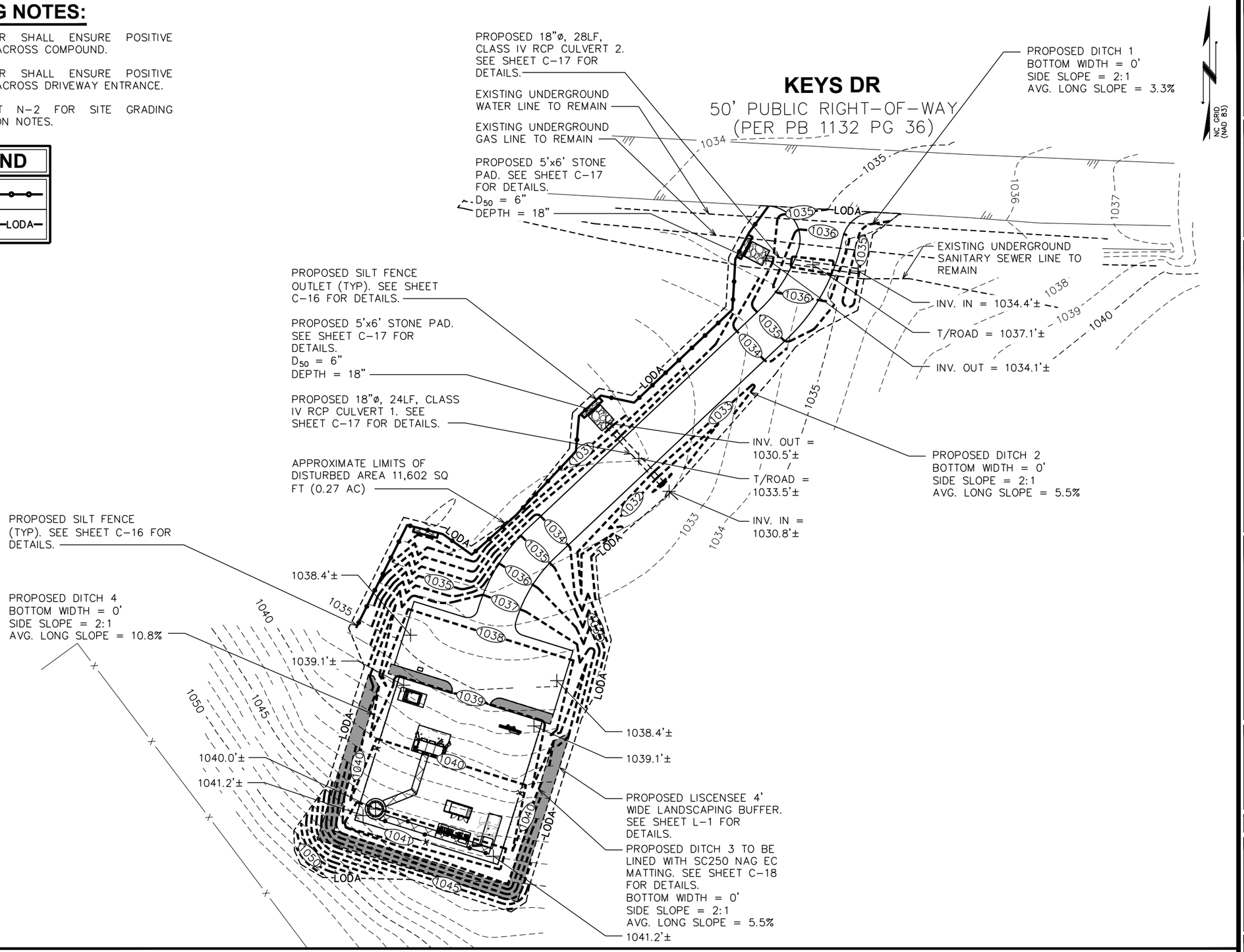
REVISION: **6**

TEP#:263516.598297

GRADING NOTES:

1. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE ACROSS COMPOUND.
2. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE ACROSS DRIVEWAY ENTRANCE.
3. SEE SHEET N-2 FOR SITE GRADING PREPARATION NOTES.

LEGEND	
SILT FENCE	
LODA	LODA



GRADING & EROSION CONTROL PLAN

SCALE: 1" = 30'

0 30 60

SCALE IN FEET

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 18401
SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

GRADING & EROSION CONTROL PLAN

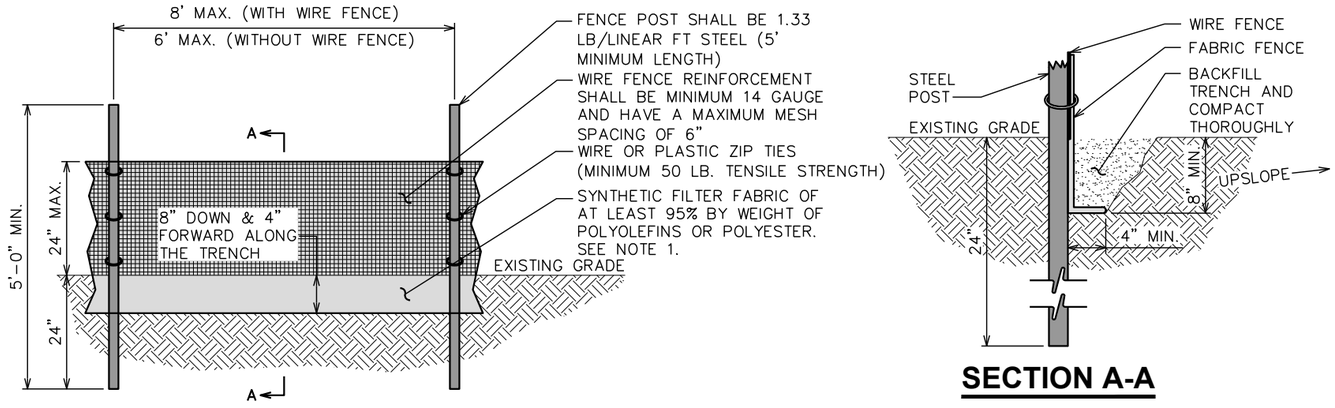
SHEET NUMBER: **C-15**

REVISION: 6

TEP#263516.598297

NOTES:

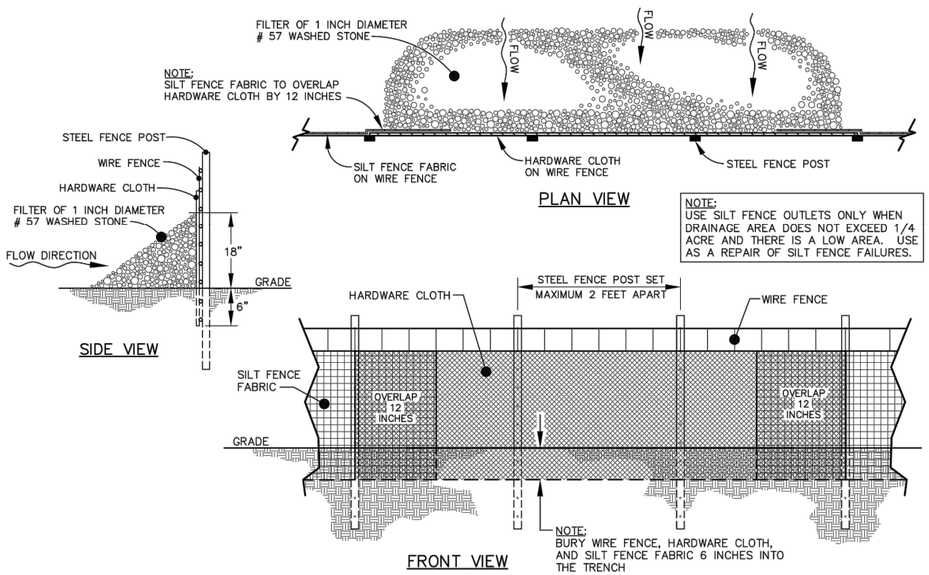
1. FILTER FABRIC SHALL CONFORM TO THE REQUIREMENTS LISTED IN ASTM D 6461.
2. ENDS OF INDIVIDUAL FILTER FABRIC SHALL BE SECURELY FASTENED AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST.
3. PLACE 12 INCHES OF FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
4. INSPECT SEDIMENT FENCE(S) AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL.
5. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE.
6. AFTER CONSTRUCTION IS COMPLETE, THE CONTRACTOR SHALL REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE AND PROPERLY STABILIZE THE SITE.



SECTION A-A

SILT FENCE DETAIL

SCALE: N.T.S.



STANDARD SILT FENCE OUTLET DETAIL

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 34401
SCOTT BRANTLEY
January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

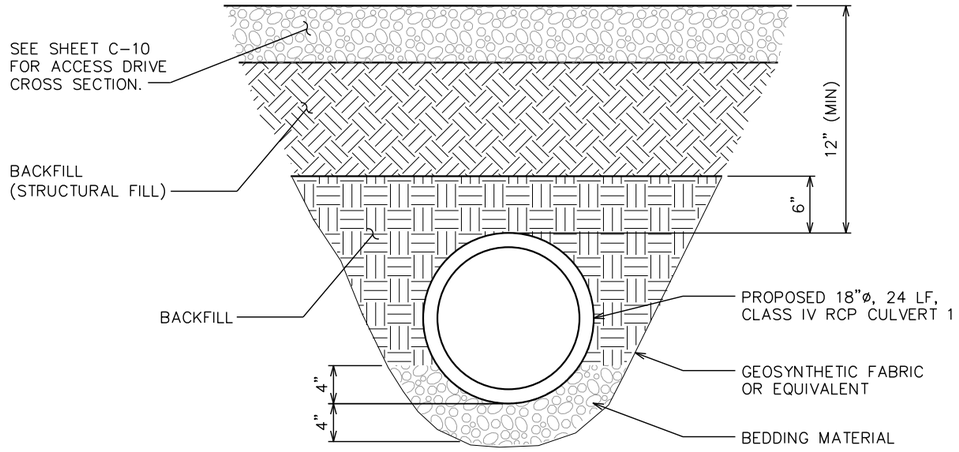
SHEET TITLE:

SILT FENCE DETAILS

SHEET NUMBER: **C-16**

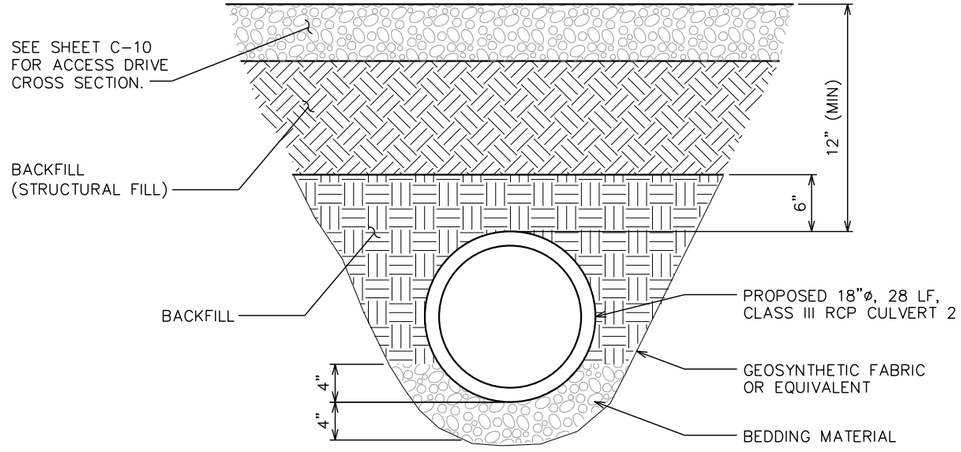
REVISION: **6**

TEP#:263516.598297



18"Ø CULVERT 1 DETAIL

SCALE: N.T.S.



18"Ø CULVERT 2 DETAIL

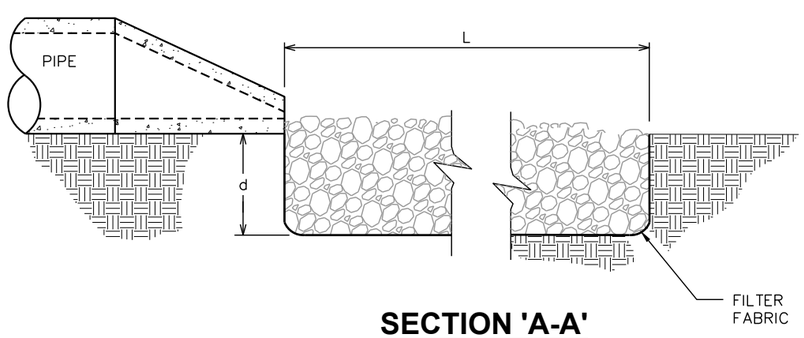
SCALE: N.T.S.

NOTES:

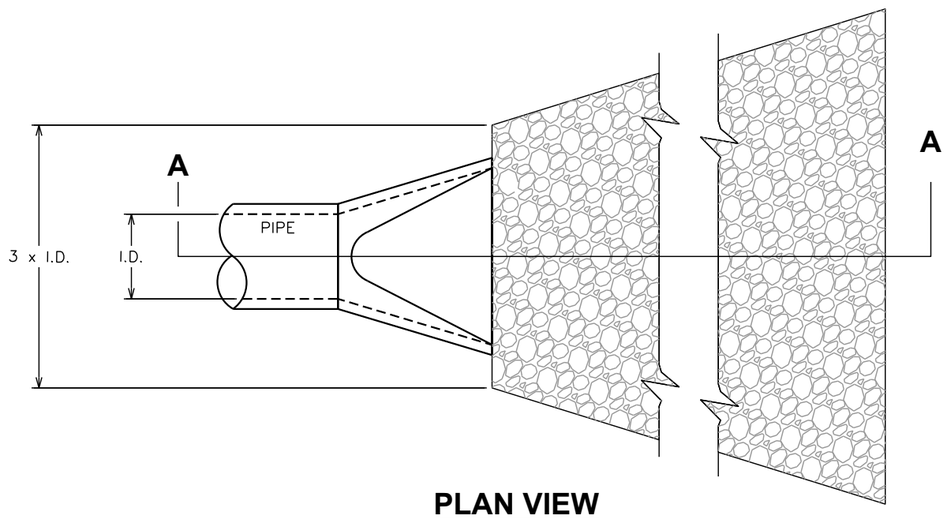
1. L = THE LENGTH OF THE RIPRAP APRON.
2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6" (INCHES).
3. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

DISSIPATOR PAD SIZING

RIP-RAP APRON NO.	CULVERT DIAMETER (IN)	WIDTH (FT)	LENGTH (FT)	DEPTH (IN)	D_{50} (IN)
1	18	5	6	18	6
2	18	5	6	18	6



SECTION 'A-A'



PLAN VIEW

DISSIPATOR PAD DETAILS

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA
PROFESSIONAL
No. 39401
LICENSED
ENGINEER
SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

CULVERT DETAILS

SHEET NUMBER: **C-17**

REVISION: **6**

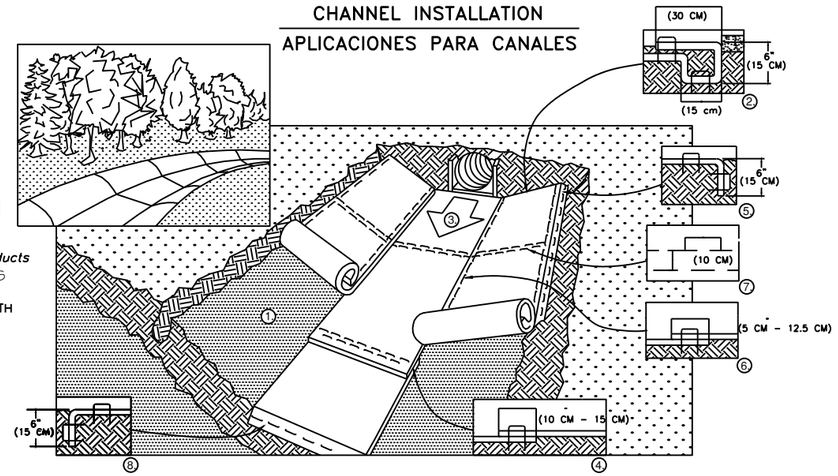
TEP#:263516.598297

CHANNEL INSTALLATION
APLICACIONES PARA CANALES

NORTH AMERICAN GREEN

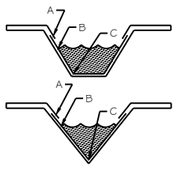
EROSION CONTROL *Products* *Guaranteed* SOLUTIONS

14649 HIGHWAY 41 NORTH
EVANSVILLE, IN 47725
800-772-2040
www.nagreen.com



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMAPCT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) ACROSS THE WIDTH OF THE RECP's.
3. ROLL CENTER RECP's IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM , STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE RECP's END OVER END (SHINGLE STYLE) WITH A 4" - 6" (10 CM - 15 CM) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER TO SECURE RECP's.
5. FULL LENGTH EDGE OF RECP's AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT RECP's MUST BE OVERLAPPED APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) (DEPENDING ON RECP's TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9 M - 12 M) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE RECP's MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

NOTE:
* IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.



CRITICAL POINTS

A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

NOTE:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.

PUNTOS CRITICOS

A. TRASLAPES Y JUNTAS
B. LINEAS DE AGUA PROYECTADA
C. FONDO DEL CANAL/VERTICES DE LAS PENDIENTES LATERALES

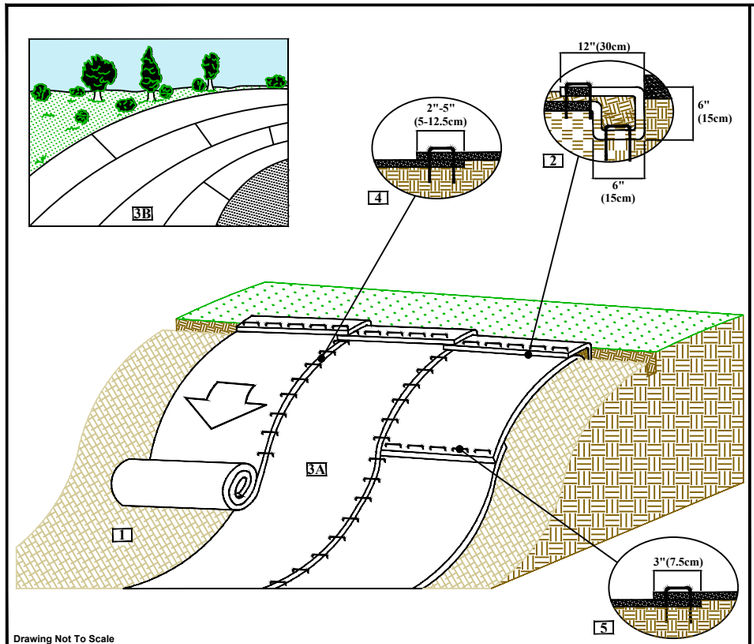
NOTA:
* LA SEPARACION HORIZONTAL DE LAS GRAPAS SE DEBE ALTERAR SI SE NECESITA, PARA PERMITIR QUE LAS GRAPAS ASEGUREN LOS PUNTOS CRITICOS A LO LARGO DE LA SUPERFICIE DEL CANAL.

** EN CONDICIONES DE SUELO SUELTO, PUEDE QUE SE NECESITEN GRAPAS O ESTACAS DE MAS DE 6" (15 CM) DE LARGO PARA ASEGURAR LAS MANTAS CORRECTAMENTE.

1. PREPARE EL SUELO DE COLOCAR LAS MANTAS, INCLUYENDO LA APLICASION DE CAL, FERTILIZANTE SEMILLA. NOTA: CUANDO ESTE USANDO CELL-O-SEED NO SIEMBRE EL AREA PREPARADA. CELL-O-SEED TIENE QUE INSTALARSE CON EL LADO DE PAPEL HACIA ABAJO.
2. COMIENCE EN LA CABECERA DEL CANAL SUJETANDO LA MANTA EN UNA ZANJA DE 6" (15 CM) DE PROFUNDIDAD POR 6" (15 CM). DE ANCHO CON APROXIMADAMENTE 12" (30 CM) DE LA MANTA EXTENDIDA MAS ALLA DE LA PENDIENTE ALTA DE LA ZANJA. SUJETE RELLENE Y COMPACTE LA ZANJA DESPUES DEL ENGRAPE. RIEGUE LA SEMILLA EN EL SUELO COMPACTADO Y DOBLE LAS 12" (30 CM) REMANENTES DE MANTA SOBRE LA SEMILLA Y EL SUELO COMPACTADO. ASEGURE LA MANTA SOBRE EL SUELO CON UNA LINEADE GRAPAS O ESTACAS APROXIMADAMENTE 12" (30 CM) UNA DE LA OTRA A TRAVES DEL ANCHO DE LA MANTA.
3. DESENROLLE LA MANTA DEL MEDIO EN EL FONDO DEL CANAL Y EN LA DIRECCION DEL FLUJO DE AGUA CON EL LADO APROPIADO HACIA LA SUPERFICIE DEL SUELO. TODAS LAS MANTAS DEBERAN ASEGURARSE A LA SUPERFICIE DEL SUELO POR MEDIO DE GRAPAS O ESTACAS EN LUGARESAPROPIADOS TAL Y COMO SE INDICA EN EL PATRON GUIA DE ENGRAPADO. CUANDO ESTE USANDO EL DOT SYSTEM . LAS GRAPAS O ESTACAS DEBEN COLOCARSE A TRAVES DE CADA UNO DE LOS PUNTOS CON COLOR CORRESPONDIENTES AL PATRON DE ENGRAPADO APROPIADO.
4. COLOQUE LAS MANTAS CONSECUTIVAS BORDE SOBRE BORDE (TIPO ESCALONADO) CON UN TRASLAPE DE 4" - 6" (10 CM - 15 CM). USE UNA LINEA DOBLE DE GRAPAS ESCALONADAS, SEPARADAS POR 4" (10 CM) Y CADA 4" (10 CM) SOBRE EL CENTRO PARA ASEGURAR LAS MANTAS.
5. EN EL TOPE DE LAS DOS PENDIENTES LATERALES DEL CANAL, SE DEBE SUJETAR TODO EL LARGO DE LA ORILLA DE LAS MANTAS CON UNA LINEA DE GRAPAS O ESTACAS APROXIMADAMENTE CADA 12" (30 CM) UNA DE LA OTRA EN UNA ZANJA DE 6" (15 CM) DE PROFUNDIDAD POR 6" (15 CM) DE ANCHO. RELLENE Y COMPACTE LA ZANJA DESPUES DEL ENGRAPE.
6. LAS MANTAS ADYACENTES DEBEN TRASLAPARSE APROXIMADAMENTE DE 2" - 5" (5 CM- 12.5 CM) (DEPENDIENDO DEL TIPO DE. MANTA) Y ENGRAPPARSE.
7. EN APLICACIONES PARA CANALES DE FLUJO ALTO, SE RECOMIENDA DEJAR UNA RANURA PARA EL CHEQUEO DE LAS GRAPAS A INTERVALOS DE 30 A 40 PIES (9 M - 12 M). USE UNA LINEA DOBLE DE PRAPAS ESCALONADAS, SEPARADAS POR 4" (10 CM) Y CADA 4" (10 CM) SOBRE EL CENTRO A TRAVES DE TODO EL ANCHO DEL CANAL.
8. LOS BORDES FINALES DE LAS MANTAS DEBEN SUJETARSE CON UNA LINEA DE GRAPAS O ESTACAS APROXIMADAMENTE CADA 12" 30 CM) UNA DE LA OTRA EN UNA ZANJA DE 6" (15 CM) DE PROFUNDIDAD POR 6" (15 CM) DE ANCHO. RELLENE Y COMPACTE DESPUES DEL ENGRAPADO.

NOTA:
* EN CONDICIONES DE SUELTO, PUEDE QUE SE NECESITEN GRAPAS O ESTACAS DE MAS DE 6" (15 CM) DE LARGO PARA ASEGURAR LAS MANTAS CORRECTAMENTE.

REV. 01/05



Drawing Not To Scale

SLOPE INSTALLATION DETAIL

1. Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed.
2. Begin at the top of the slope by anchoring the RECPs in a 6"(15cm) deep X 6"(15cm) wide trench with approximately 12" (30cm) of RECPs extended beyond the up-slope portion of the trench. Anchor the RECPs with a row of staples/stakes approximately 12" (30cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to the compacted soil and fold the remaining 12"(30cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes spaced approximately 12"(30cm) apart across the width of the RECPs.
3. Roll the RECPs (A) down or (B) horizontally across the slope. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.
4. The edges of parallel RECPs must be stapled with approximately 2" - 5" (5-12.5cm) overlap depending on the RECPs type.
5. Consecutive RECPs spliced down the slope must be end over end (Shingle style) with an approximate 3"(7.5cm) overlap. Staple through overlapped area, approximately 12"(30cm) apart across entire RECPs width.

*NOTE:
In loose soil conditions, the use of staple or stake lengths greater than 6"(15cm) may be necessary to properly secure the RECP's.

NORTH AMERICAN GREEN
5401 St. Wendel - Cynthiana Rd.
Poseyville, IN 47633
PH: 800-772-2040
www.nagreen.com

Drawn on: 5-4-17

EROSION CONTROL MATTING DETAILS

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 38402
SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

EROSION CONTROL MATTING DETAILS

SHEET NUMBER: **C-18**

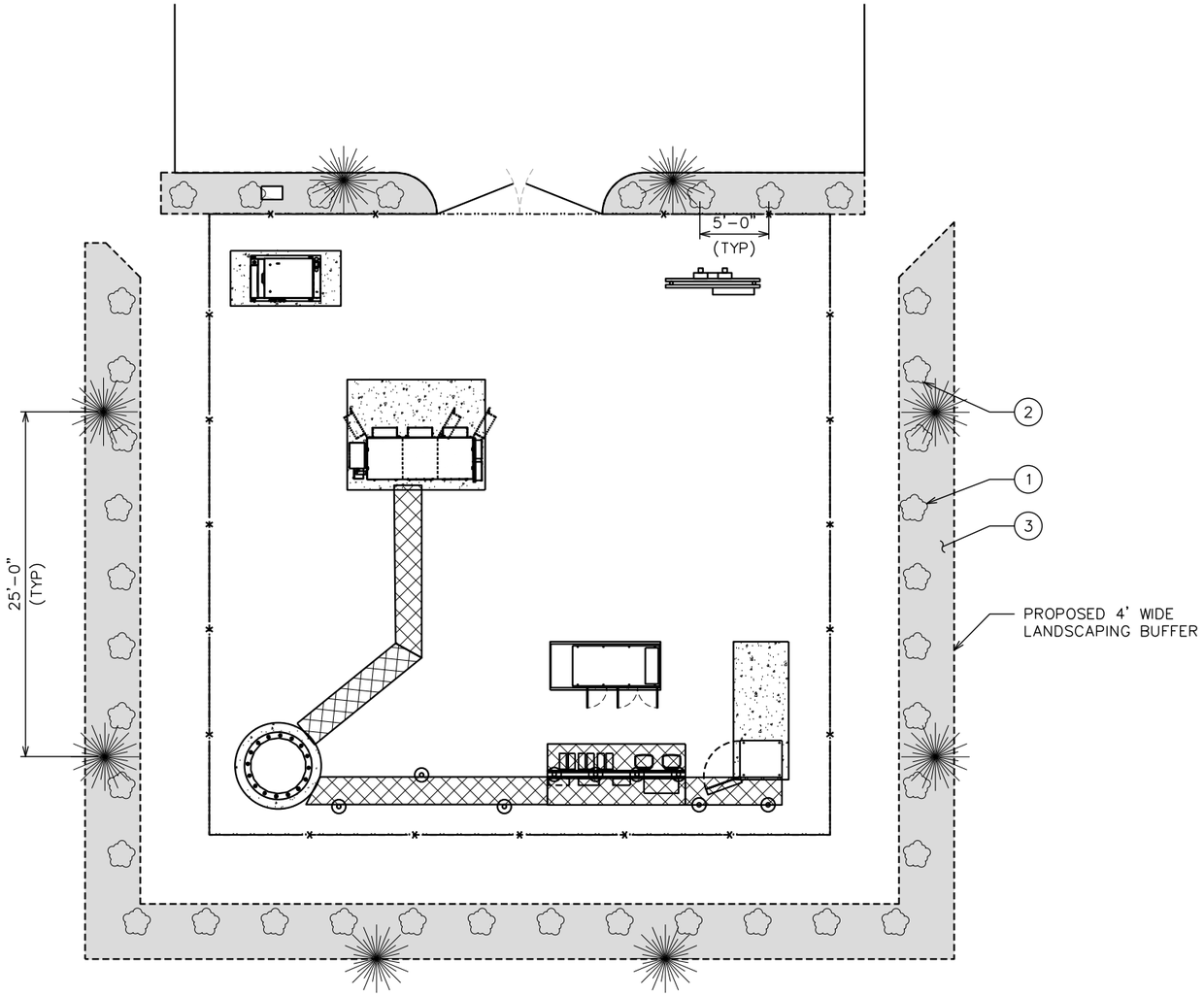
REVISION: 6

TEP#263516.598297

PLANTING SCHEDULE

ITEM	QTY.	BOTANICAL NAME	COMMON NAME	HEIGHT @ PLANTING	HEIGHT @ MATURITY	CALIPER/ SPREAD	SPACING	REMARKS
EVERGREEN TREE								
(1)	8	(Thuja Standishii)	GREEN GIANT	–	40'–0" (MIN)	2" (MIN)	25'–0"	SHOWN AS
EVERGREEN SHRUB								
(2)	38	Morella Cenfera	WAX MYRTLE	–	6'–0" (MIN)	–	5'–0"	SHOWN AS
MULCH								
(3)	–	-	–	–	–	–	–	APPLY 3"–4" DEEP FROM THE TRUNKLINE TO THE DRIPLINE. FOR GROUND COVER – APPLY 1"–2" DEEP.

LANDSCAPING REQUIREMENTS:
1 EVERGREEN TREE SPACED EVERY 25' (MAX) FROM CENTER AND 1 EVERGREEN PLANT CAPABLE OF FORMING A CONTINUOUS SCREEN SPACED EVERY 5' (MIN) REACHING 6' IN HEIGHT.



NOTE:

PURPOSE OF THIS PLAN IS TO SUPPLEMENT EXISTING VEGETATION. DO NOT REMOVE EXISTING TREES UNAFFECTED BY COMPOUND CONSTRUCTION.

LANDSCAPING PLAN

SCALE: 3/32" = 1'–0"

0 8 16
SCALE IN FEET

NAD 83 GRID NC

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 38401
SCOTT BRANTLEY
January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

LANDSCAPING PLAN

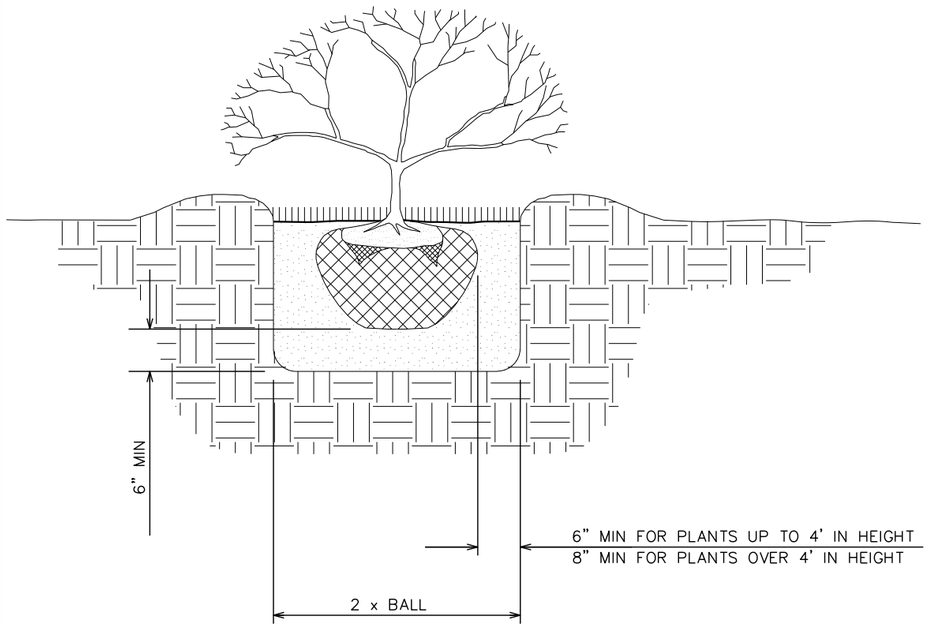
SHEET NUMBER: **L-1**

REVISION: **6**

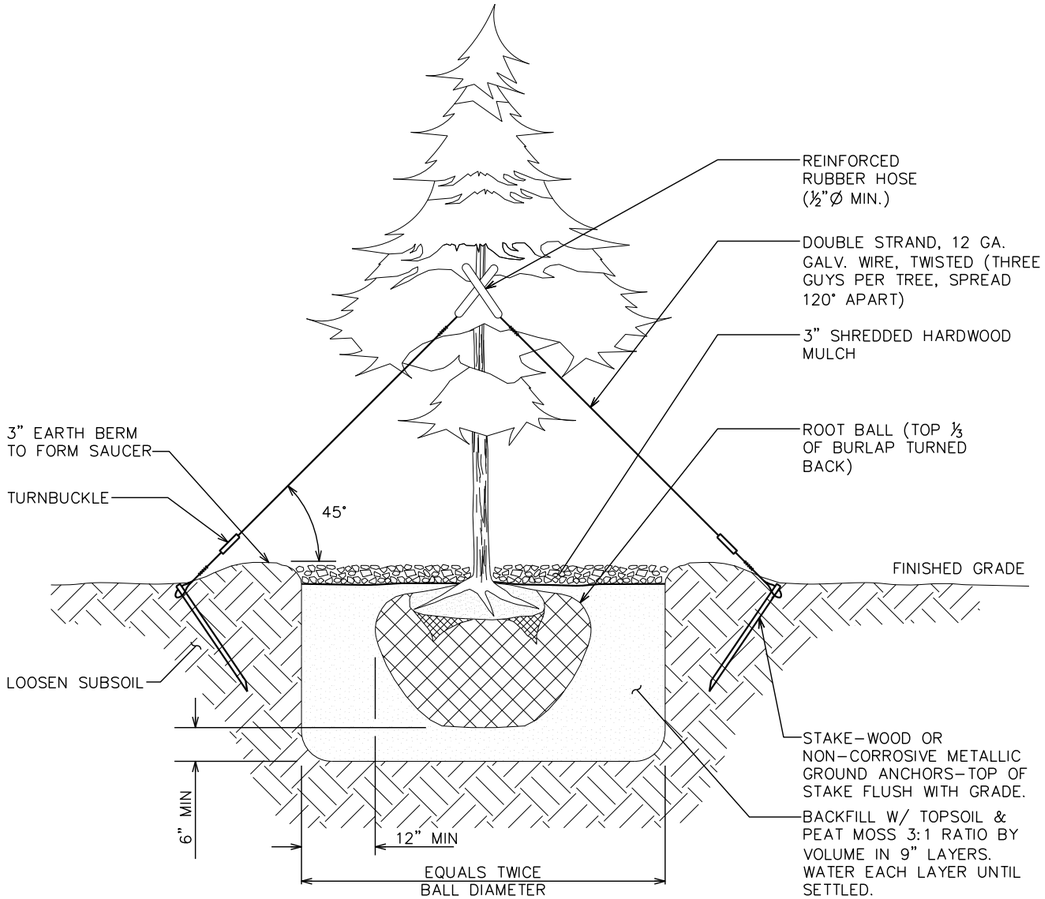
TEP#:26351 6.598297

LANDSCAPE NOTES:

1. TOPSOIL TO BE PROVIDED BY SITE CONTRACTOR IN ROUGH GRADE TO WITHIN 1" OF FINISH GRADE.
2. EACH PLANT TO BE IN GOOD CONDITION AFTER SHEARING AND PRUNING.
3. EACH PLANT TO BE FREE FROM DISEASE, INSECT INFESTATION, AND MECHANICAL INJURIES, AND IN ALL RESPECTS BE SUITABLE FOR FIELD PLANTING.
4. ALL PLANTS TO BE FULLY GUARANTEED (LABOR AND MATERIALS) FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF INSTALLATION.
5. ALL PLANTS SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.I–1973 IN REGARD TO SIZING, GROWING, AND B&B SPECIFICATIONS.
6. THE CONTRACTOR SHALL PROTECT ALL EXISTING TREES AND SHRUBS WITHIN THE CONSTRUCTION AREA IDENTIFIED AS "TO REMAIN" FROM DAMAGE BY EQUIPMENT AND CONSTRUCTION ACTIVITIES.



SHRUB PLANTING DETAIL



TREE PLANTING DETAIL

LANDSCAPING DETAILS

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA — TEP OPCO, LLC 5399 — CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER — No. 35401 — SCOTT BRANTLEY

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

LANDSCAPING DETAILS

SHEET NUMBER: **L-2**

REVISION: 6

TEP#:263516.598297

ELECTRICAL NOTES:

SCOPE:

1. PROVIDE LABOR, MATERIALS, INSPECTION, AND TESTING TO PROVIDE CODE COMPLIANCE FOR ELECTRIC, TELEPHONE, AND GROUNDING/LIGHTNING SYSTEMS.

CODES:

1. THE INSTALLATION SHALL COMPLY WITH APPLICABLE LAWS AND CODES. THESE INCLUDE BUT ARE NOT LIMITED TO THE LATEST ADOPTED EDITIONS OF:
   A. THE NATIONAL ELECTRICAL SAFETY CODE
   B. THE NATIONAL ELECTRIC CODE – NFPA–70
   C. REGULATIONS OF THE SERVING UTILITY COMPANY
   D. LOCAL AND STATE AMENDMENTS
   E. THE INTERNATIONAL ELECTRIC CODE – IEC (WHERE APPLICABLE)
2. PERMITS REQUIRED SHALL BE OBTAINED BY THE CONTRACTOR.
3. AFTER COMPLETION AND FINAL INSPECTION OF THE WORK, THE OWNER SHALL BE FURNISHED A CERTIFICATE OF COMPLETION AND APPROVAL.

TESTING:

1. UPON COMPLETION OF THE INSTALLATION, OPERATE AND ADJUST THE EQUIPMENT AND SYSTEMS TO MEET SPECIFIED PERFORMANCE REQUIREMENTS. THE TESTING SHALL BE DONE BY QUALIFIED PERSONNEL.

GUARANTEE:

1. IN ADDITION TO THE GUARANTEE OF THE EQUIPMENT BY THE MANUFACTURER, EACH PIECE OF EQUIPMENT SPECIFIED HEREIN SHALL ALSO BE GUARANTEED FOR DEFECTS OF MATERIAL OR WORKMANSHIP OCCURRING DURING A PERIOD OF ONE (1) YEAR FROM FINAL ACCEPTANCE OF THE WORK BY THE OWNER AND WITHOUT EXPENSE TO THE OWNER.
2. THE WARRANTEE CERTIFICATES & GUARANTEES FURNISHED BY THE MANUFACTURERS SHALL BE TURNED OVER TO THE OWNER.

UTILITY CO-ORDINATION:

1. CONTRACTOR SHALL COORDINATE WORK WITH THE POWER AND TELEPHONE COMPANIES AND SHALL COMPLY WITH THE SERVICE REQUIREMENTS OF EACH UTILITY COMPANY.

EXAMINATION OF SITE:

1. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL VISIT THE SITE OF THE JOB AND SHALL FAMILIARIZE HIMSELF WITH THE CONDITIONS AFFECTING THE PROPOSED ELECTRICAL INSTALLATION AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. FAILURE TO COMPLY WITH THE INTENT OF THIS SECTION WILL IN NO WAY RELIEVE THE CONTRACTOR OF PERFORMING THE WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM OR SYSTEMS.

CUTTING, PATCHING AND EXCAVATION:

1. COORDINATION OF SLEEVES, CHASES, ETC., BETWEEN SUBCONTRACTORS WILL BE REQUIRED PRIOR TO THE CONSTRUCTION OF ANY PORTION OF THE WORK. CUTTING AND PATCHING OF WALLS, PARTITIONS, FLOORS, AND CHASES IN CONCRETE, WOOD, STEEL OR MASONRY SHALL BE DONE AS PROVIDED ON THE DRAWINGS.
2. NECESSARY EXCAVATIONS AND BACKFILLING INCIDENTAL TO THE ELECTRICAL WORK SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWING.
3. SEAL PENETRATIONS THROUGH RATED WALLS, FLOORS, ETC., WITH APPROVED METHOD AS LISTED BY UL.

RACEWAYS / CONDUITS GENERAL:

1. CONDUCTORS SHALL BE INSTALLED IN LISTED RACEWAYS. CONDUIT SHALL BE RIGID STEEL, EMT, SCH40 PVC, OR SCH80PVC AS INDICATED ON THE DRAWINGS. THE RACEWAY SYSTEM SHALL BE COMPLETE COMPLETE BEFORE INSTALLING CONDUCTORS.
2. EXTERIOR RACEWAYS AND GROUNDING SLEEVES SHALL BE SEALED AT POINTS OF ENTRANCE AND EXIT. THE RACEWAY SYSTEM SHALL BE BONDED PER NEC.

EXTERIOR CONDUIT:

1. EXPOSED CONDUIT SHALL BE NEATLY INSTALLED AND RUN PARALLEL OR PERPENDICULAR TO STRUCTURAL ELEMENTS. SUPPORTS AND MOUNTING HARDWARE SHALL BE HOT DIPPED GALVANIZED STEEL.
2. THE CONDUIT SHALL BE RIGID STEEL AT GRADE TRANSITIONS OR WHERE EXPOSED TO DAMAGE.
3. UNDERGROUND CONDUITS SHALL BE RIGID STEEL, SCH40 PVC, OR SCH80 PVC AS INDICATED ON THE DRAWINGS.
4. BURIAL DEPTH OF CONDUITS SHALL BE AS REQUIRED BY CODE FOR EACH SPECIFIC CONDUIT TYPE AND APPLICATION, BUT SHALL NOT BE LESS THAN THE FROST DEPTH AT THE SITE.
5. CONDUIT ROUTES ARE SCHEMATIC. CONTRACTOR SHALL FIELD VERIFY ROUTES BEFORE BID. COORDINATE ROUTE WITH WIRELESS CARRIER AND/OR BUILDING OWNER.

INTERIOR CONDUIT:

1. CONCEALED CONDUIT IN WALLS OR INTERIOR SPACES ABOVE GRADE MAY BE EMT OR PVC.
2. CONDUIT RUNS SHALL USE APPROVED COUPLINGS AND CONNECTORS. PROVIDE INSULATED BUSHING FOR ALL CONDUIT TERMINATIONS. CONDUIT RUNS IN A WET LOCATION SHALL HAVE WATERPROOF FITTINGS.
3. PROVIDE SUPPORTS FOR CONDUITS IN ACCORDANCE WITH NEC REQUIREMENTS. CONDUITS SHALL BE SIZED AS REQUIRED BY NEC.

EQUIPMENT:

1. DISCONNECT SWITCHES SHALL BE SERVICE ENTRANCE RATED, HEAVY DUTY TYPE.
2. CONTRACTOR SHALL VERIFY MAXIMUM AVAILABLE FAULT CURRENT AND COORDINATE INSTALLATION WITH THE LOCAL UTILITY BEFORE STARTING WORK. CONTRACTOR WILL VERIFY THAT EXISTING CIRCUIT BREAKERS ARE RATED FOR MORE THAN AVAILABLE FAULT CURRENT AND REPLACE AS NECESSARY.
3. NEW CIRCUIT BREAKERS SHALL BE RATED TO WITHSTAND THE MAXIMUM AVAILABLE FAULT CURRENT AS DETERMINED BY THE LOCAL UTILITY.

CONDUCTORS:

1. FURNISH AND INSTALL CONDUCTORS SPECIFIED IN THE DRAWINGS. CONDUCTORS SHALL BE COPPER AND SHALL HAVE TYPE THWN (MIN) (75° C) INSULATION, RATED FOR 600 VOLTS.
2. THE USE OF ALUMINUM CONDUCTORS SHALL BE LIMITED TO THE SERVICE FEEDERS INSTALLED BY THE UTILITY.
3. CONDUCTORS SHALL BE PROVIDED AND INSTALLED AS FOLLOWS:
   A. MINIMUM WIRE SIZE SHALL BE #12 AWG.
   B. CONDUCTORS SIZE #8 AND LARGER SHALL BE STRANDED. CONDUCTORS SIZED #10 AND #12 MAY BE SOLID OR STRANDED.
   C. CONNECTION FOR #10 AWG #12 AWG SHALL BE BY TWISTING TIGHT AND INSTALLING INSULATED PRESSURE OR WIRE NUT CONNECTIONS.
   D. CONNECTION FOR #8 AWG AND LARGER SHALL BE BY USE OF STEEL CRIMP–ON SLEEVES WITH NYLON INSULATOR.
4. CONDUCTORS SHALL BE COLOR CODED IN ACCORDANCE WITH NEC STANDARDS.

UL COMPLIANCE:

1. ELECTRICAL MATERIALS, DEVICES, CONDUCTORS, APPLIANCES, AND EQUIPMENT SHALL BE LABELED/LISTED BY UL OR ACCEPTED BY JURISDICTION (I.E., LOCAL COUNTY OR STATE) APPROVED THIRD PARTY TESTING AGENCY.

GROUNDING:

1. ELECTRICAL NEUTRALS, RACEWAYS AND NON–CURRENT CARRYING PARTS OF ELECTRICAL EQUIPMENT AND ASSOCIATED ENCLOSURES SHALL BE GROUNDED IN ACCORDANCE WITH NEC ARTICLE 250. THIS SHALL INCLUDE NEUTRAL CONDUCTORS, CONDUITS, SUPPORTS, CABINETS, BOXES, GROUND BUSSES, ETC. THE NEUTRAL CONDUCTOR FOR EACH SYSTEM SHALL BE GROUNDED AT A SINGLE POINT.
2. PROVIDE GROUND CONDUCTOR IN RACEWAYS PER NEC.
3. PROVIDE BONDING AND GROUND TO MEET NFPA 780 – "LIGHTNING PROTECTION" AS A MINIMUM.
4. PROVIDE GROUNDING SYSTEM AS INDICATED ON THE DRAWINGS, AS REQUIRED BY THE NATIONAL ELECTRIC CODE, RADIO EQUIPMENT MANUFACTURERS, AND MOTOROLA R56 (AS APPLICABLE).

ABBREVIATIONS AND LEGEND

A	–	AMPERE
AFG	–	ABOVE FINISHED GRADE
ATS	–	AUTOMATIC TRANSFER SWITCH
AWG	–	AMERICAN WIRE GAUGE
BCW	–	BARE COPPER WIRE
BFG	–	BELOW FINISHED GRADE
BKR	–	BREAKER
C	–	CONDUIT
CKT	–	CIRCUIT
DISC	–	DISCONNECT
EGR	–	EXTERNAL GROUND RING
EMT	–	ELECTRIC METALLIC TUBING
FSC	–	FLEXIBLE STEEL CONDUIT
GEN	–	GENERATOR
GPS	–	GLOBAL POSITIONING SYSTEM
GRD	–	GROUND
IGB	–	ISOLATED GROUND BAR
IGR	–	INTERIOR GROUND RING (HALO)
KW	–	KILOWATTS
NEC	–	NATIONAL ELECTRIC CODE
PCS	–	PERSONAL COMMUNICATION SYSTEM
PH	–	PHASE
PNL	–	PANEL
PNLBD	–	PANELBOARD
PVC	–	RIGID NON–METALLIC CONDUIT
RGS	–	RIGID GALVANIZED STEEL CONDUIT
SW	–	SWITCH
TGB	–	TOWER GROUND BAR
UL	–	UNDERWRITERS LABORATORIES
V	–	VOLTAGE
W	–	WATTS
XFMR	–	TRANSFORMER
XMTR	–	TRANSMITTER

----E----	UNDERGROUND ELECTRICAL CONDUIT
----T----	UNDERGROUND TELEPHONE CONDUIT
	KILOWATT–HOUR METER
----------	UNDERGROUND BONDING AND GROUNDING CONDUCTOR.
⌀	GROUND ROD
●	CADWELD
⊠	GROUND ROD WITH INSPECTION WELL

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 32280
LICENSED
MARK S. QUAKENBUSH

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

ELECTRICAL NOTES

SHEET NUMBER: **E-1**

REVISION: 6

TEP#263516.598297

NOTES:

1. ALL POWER CIRCUITS SHALL USE COPPER CONDUCTORS WITH THHN/THWN INSULATION AND ALL TERMINATIONS SHALL BE RATED FOR A MIN OF 75°C
2. CONTRACTOR SHALL VERIFY LOADS DO NOT EXCEED 200 AMPS OR GENERATOR CAPACITY

200A 120/240V VERIZON POWER PANEL SCHEDULE

DEMAND FACTOR	LOAD SERVED	UNCOMPENSATED VOLT AMPERES L1 (VA)	UNCOMPENSATED VOLT AMPERES L2 (VA)	TRIP	CKT #	PHASE	CKT #	TRIP	UNCOMPENSATED VOLT AMPERES L1 (VA)	UNCOMPENSATED VOLT AMPERES L2 (VA)	LOAD SERVED	DEMAND FACTOR
100%	RECTIFIER #1	1780		20	1	A	2	20	300***		GEN. BATTERY CHARGER*	125%
			1780		3	B	4	20		1500	GEN. BLOCK HEATER*	125%**
100%	RECTIFIER #2	1780		20	5	A	6	20	1780		RECTIFIER #3	100%
			1780		7	B	8			1780		
100%	RECTIFIER #4	1780		20	9	A	10	20	1780		RECTIFIER #5	100%
			1780		11	B	12			1780		
125%	TVSS*	0		30	13	A	14	20	1780		RECTIFIER #6	100%
			0		15	B	16			1780		
100%	RECTIFIER #7	1780		20	17	A	18	20	1780		RECTIFIER #8	100%
			1780		19	B	20			1780		
100%	RECTIFIER #9	1780		20	21	A	22	20	1780		RECTIFIER #10	100%
			1780		23	B	24			1780		
100%	SPARE RECTIFIER #11	0		20	25	A	26	20	0		SPARE RECTIFIER #12	100%
			0		27	B	28			0		
125%	GFCI REC. (VZW)/AREA LIGHTS*	580		20	29	A	30	20	180		GFCI RECEPT. (RBA84)*	125%
VOLT AMPS		9,480	8,900						9,380	10,400	VOLT AMPS	
					L1 VOLT AMPERES	18,860	19,300		L2 VOLT AMPERES			
					L1 DEMAND VOLT AMPERES (INCLUDES DEMAND FACTOR)	19,125	19,675		L2 DEMAND VOLT AMPERES (INCLUDES DEMAND FACTOR)			
					L1 DEMAND AMPS	159.38	163.96		L2 DEMAND AMPS			
						163.96			MAX DEMAND AMPS			

CONNECTED GENERATOR LOAD

VOLT AMPS	9,480	8,900				9,080	10,400	VOLT AMPS
			L1 VOLT AMPERES	18,560	19,300	L2 VOLT AMPERES		
			L1 DEMAND VOLT AMPERES (INCLUDES DEMAND FACTOR)	18,750	19,300	L2 DEMAND VOLT AMPERES (INCLUDES DEMAND FACTOR)		
			L1 DEMAND AMPS	156.25	160.83	L2 DEMAND AMPS		
				160.83		MAX DEMAND AMPS		

* LOADING BASED ON CONSTRUCTION DRAWINGS PROVIDED BY VERIZON

** DEMAND FACTOR FOR CONNECTED GENERATOR LOAD IS 100%

*** BATTERY CHARGER LOAD IS (0) DURING GENERATOR OPERATION

VERIZON POWER PANEL SCHEDULE

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 32280
MARK S. QUAKENBUSH

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

VERIZON POWER PANEL SCHEDULE

SHEET NUMBER: **E-2A**

REVISION: 6

TEP#:263516.598297

NOTES:

1. ALL POWER CIRCUITS SHALL USE COPPER CONDUCTORS WITH THHN/THWN INSULATION AND ALL TERMINATIONS SHALL BE RATED FOR A MIN OF 75°C
2. CONTRACTOR SHALL VERIFY LOADS DO NOT EXCEED 200 AMPS OR GENERATOR CAPACITY

PROPOSED 200A, 120/240VAC AT&T INTERSECT PANEL

LOAD SERVED	VOLT AMPERES (WATTS) L1	VOLT AMPERES (WATTS) L2	TRIP	CKT #	PHASE	CKT #	TRIP	VOLT AMPERES (WATTS) L1	VOLT AMPERES (WATTS) L2	LOAD SERVED
EMERSON 521	9600		100A	1	A	2	20A	180		GFCI OUTLET
		9600		3	B	4	15A		1440	BATTERY COMPARTMENT HEATER MATS
–	–		–	5	A	6	20A	1220		GEN. BATTERY CHARGER
–		–	–	7	B	8	20A		1000	GEN. BLOCK HEATER
–	–		–	9	A	10	–	–		–
–		–	–	11	B	12	–		–	–
–	–		–	13	A	14	–	–		–
–		–	–	15	B	16	–		–	–
–	–		–	17	A	18	–	–		–
–		–	–	19	B	20	–		–	–
–	–		–	21	A	22	–	–		–
–		–	–	23	B	24	–		–	–
–	–		–	25	A	26	–	–		–
–		–	–	27	B	28	–		–	–
–	–		–	29	A	30	–	–		–
VOLT AMPS	9600	9600						1400	2440	VOLT AMPS

L1 VOLT AMPERES	11000	12040	L2 VOLT AMPERES
L1 AMPS	91.7	100.3	L2 AMPS
	100.3		MAX AMPS
	125.4		AMPS X 125%

AT&T POWER PANEL SCHEDULE

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 32280
LICENSED
MARK S. QUAKENBUSH

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

AT&T POWER PANEL SCHEDULE

SHEET NUMBER: **E-2B**

REVISION: 6

TEP#:263516.598297

NOTES:

1. METER BASE FOR 200A, 120/240V, 1ø SERVICE WITH SERVICE ENTRANCE RATED CIRCUIT BREAKER TYPE DISCONNECT SWITCH. UTILITY COMPANY TO PROVIDE METER.
2. FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT, REFER TO VENDOR PRINTS PROVIDED BY EQUIPMENT MANUFACTURER.
3. WHEN UTILITY COMPANY REQUIRES A SERVICE DISCONNECT OTHER THAN THE MAIN BREAKER IN POWER PANEL OF THE UTILITY CABINET, REMOVE BONDING JUMPER IN EQUIPMENT CABINETS AND BOND SERVICE DISCONNECT PER NEC REQUIREMENTS.
4. CONTRACTOR SHALL REVIEW AND COMPLY WITH MANUFACTURERS EQUIPMENT DRAWINGS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SHOWN.
5. CONTRACTOR SHALL OBTAIN THE MAXIMUM AVAILABLE FAULT CURRENT AT THE UTILITY SERVICE POINT FROM THE ELECTRIC COMPANY IN WRITING PRIOR TO ORDERING MATERIALS AND ENSURE THE EQUIPMENT WILL HAVE HIGHER RATING WITH A MIN VALUE OF 10,000A.
6. THE GROUNDED SERVICE CONDUCTOR SHALL BE GROUNDED AT THE SERVICE DISCONNECT ONLY
7. DO NOT BOND THE NEUTRAL TO GROUND AT THE GENERATOR
8. SIGNAGE MUST BE DISPLAYED ON DISCONNECT "OPENING THE EQUIPMENT DISCONNECT WILL CAUSE THE EMERGENCY GENERATOR TO START. TO REMOVE POWER ENTIRELY FROM EQUIPMENT, THE GENERATOR MUST BE TURNED OFF USING THE GENERATOR STOP SWITCH."

ONE LINE DIAGRAM NOTES:

A. ELECTRICAL SERVICE SHALL BE 200A, 240/120V, 1ø, 3W.

B. METER BASE WITH MAIN CIRCUIT BREAKER (SUITABLE FOR USE AS SERVICE EQUIPMENT.)

C. UTILITY COMPANY TO INSTALL 200 AMP PER METER IN PROPOSED MULTI-METER BASE. SEE SHEET E-5A FOR METER BASE DETAILS.

D. COMPLY WITH MANUFACTURER SPECIFICATIONS REGARDING WIRING REQUIREMENTS.

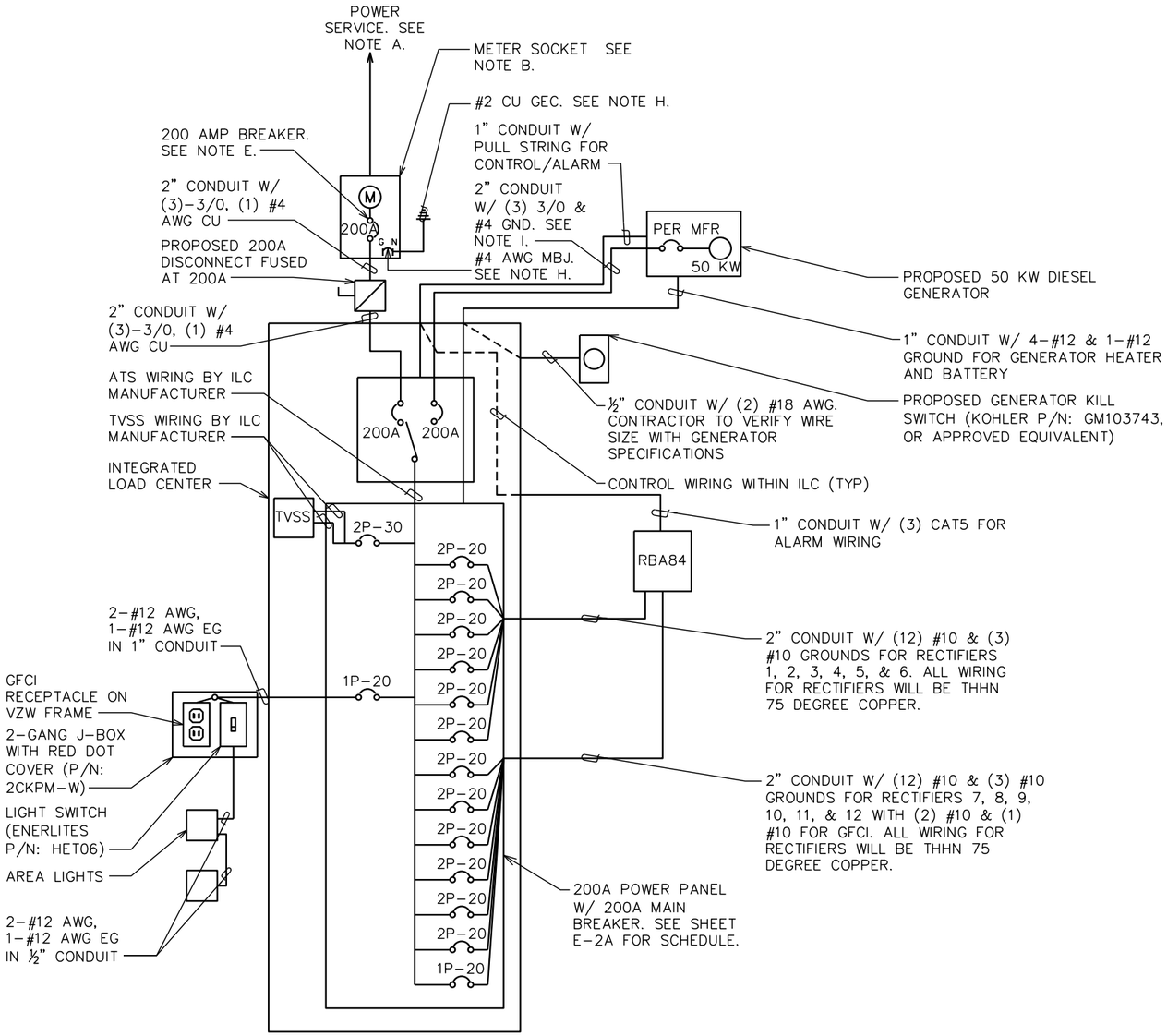
E. INSTALL A 200 AMP BREAKER BY VERIZON WIRELESS CONTRACTOR.

F. WIRE COUNT IS BASED ON EQUIPMENT SPECIFICATIONS PROVIDED BY VERIZON WIRELESS.

G. NEUTRAL CONDUCTORS TO THE RECTIFIERS WERE LEFT OFF AT THE ADVICE OF VERIZON WIRELESS EQUIPMENT ENGINEER. CONTRACTOR TO VERIFY WIRING REQUIREMENTS WITH RECTIFIER MANUFACTURER SPECIFICATIONS.

H. GROIUNDING ELECTRODE CONDUCTOR IS SIZED FOR SINGLE 200A SERVICE ONLY. IF METER BANK SHARES A COMMON NEUTRAL/GROUND POINT, CONTRACTOR WILL INSTALL (1) 3/0 COPPER PIPE.

I. CONDUCTOR SIZED BASED ON A MAXIMUM GENERATOR BREAKER RATING OF 150A.



VERIZON ONE-LINE DIAGRAM

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 32280
MARK S. QUAKENBUSH

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

VERIZON ONE-LINE DIAGRAM

SHEET NUMBER: **E-3**

REVISION: 6

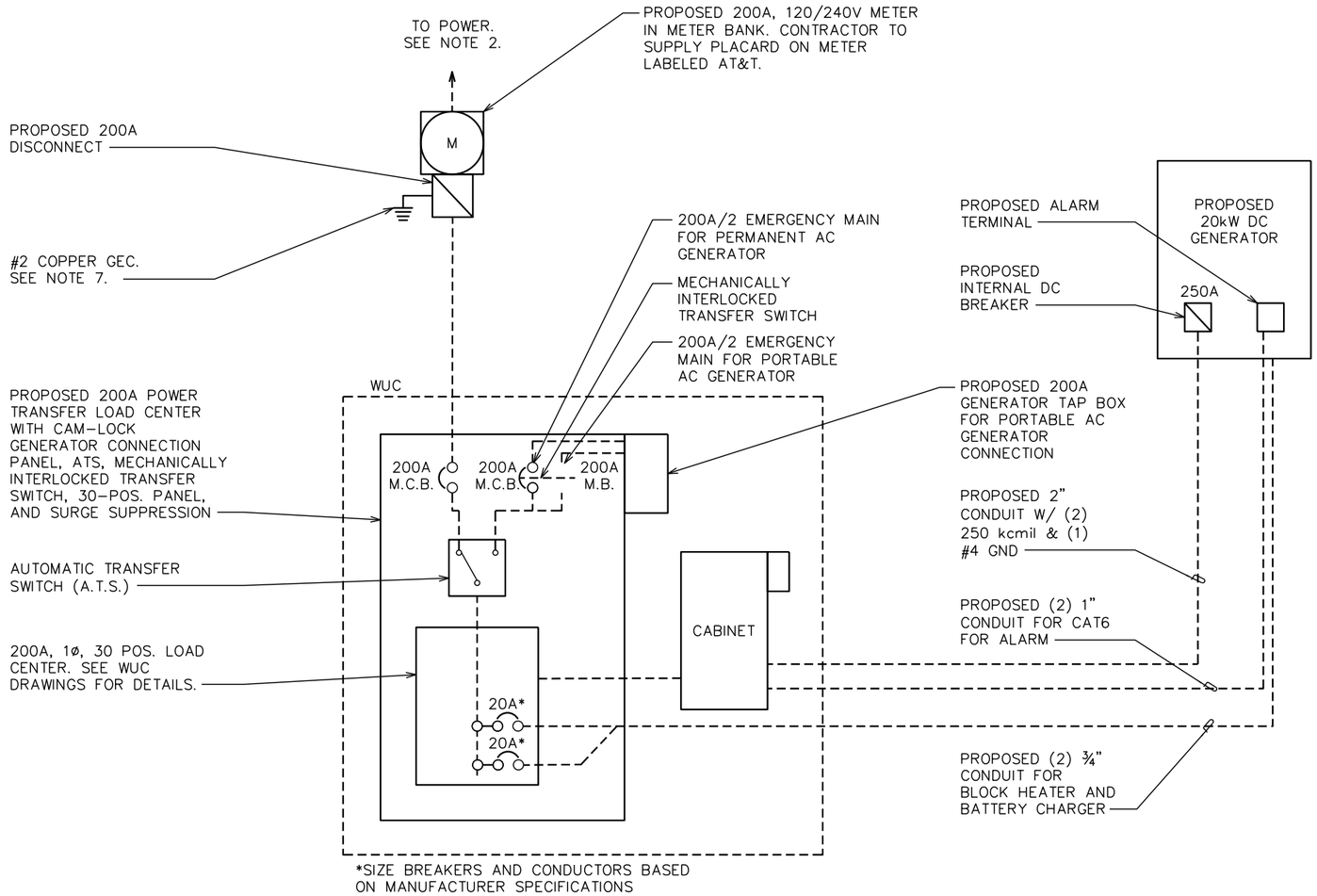
TEP#263516.598297

GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY AVAILABLE FAULT CURRENT WITH POWER COMPANY AND ENSURE ALL ELECTRICAL EQUIPMENT IS SUITABLE FOR AVAILABLE FAULT CURRENT.
2. CONTRACTOR SHALL COORDINATE UTILITY SERVICES WITH LOCAL UTILITY COMPANIES. VERIFY ALL REQUIREMENTS WITH UTILITY COMPANY STANDARDS.
3. ONE-LINE DIAGRAM IS FOR SCHEMATIC PURPOSES ONLY AND IS NOT INDICATIVE OF THE ACTUAL EQUIPMENT LAYOUT.
4. CONTRACTOR SHALL LABEL METER SOCKET WITH SERVICE OWNER NAMEPLATE WITH ½" HEIGHT MINIMUM LETTERS.
5. ALL EQUIPMENT WILL HAVE A MINIMUM AIC OF 10 KA. CONTRACTOR TO DETERMINE AVAILABLE FAULT CURRENT BEFORE ENERGIZING EQUIPMENT. THE AMOUNT OF AVAILABLE FAULT CURRENT SHALL BE MARKED ON THE SERVICE EQUIPMENT PER NEC 110.24.
6. CONTRACTOR WILL NOTIFY UTILITY COMPANY OF CHANGES IN ELECTRICAL LOAD.
7. GROUNDING ELECTRODE CONDUCTOR IS SIZED FOR SINGLE 200A SERVICE ONLY. IF METER BANK SHARES A COMMON NEUTRAL/GROUND POINT, CONTRACTOR WILL INSTALL (1) 3/0 COPPER GEC INSTEAD.

ONE-LINE DIAGRAM NOTES:

1. ELECTRICAL SERVICE SHALL BE 200A, 120/240V, 1ø, 3W.
2. FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT, REFER TO VENDOR PRINTS PROVIDED BY EQUIPMENT MANUFACTURER.
3. CONDUCTOR SIZES BASED ON TYPICAL CONFIGURATIONS. CONTRACTOR WILL VERIFY WITH MANUFACTURER SPECIFICATIONS BEFORE ORDERING OR INSTALLING PARTS.



AT&T ONE-LINE DIAGRAM

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA — TEP OPCO, LLC 5399 — CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA — PROFESSIONAL ENGINEER — No. 32280 — MARK S. QUAKENBUSH

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

AT&T ONE-LINE DIAGRAM

SHEET NUMBER: **E-3A**

REVISION: **6**

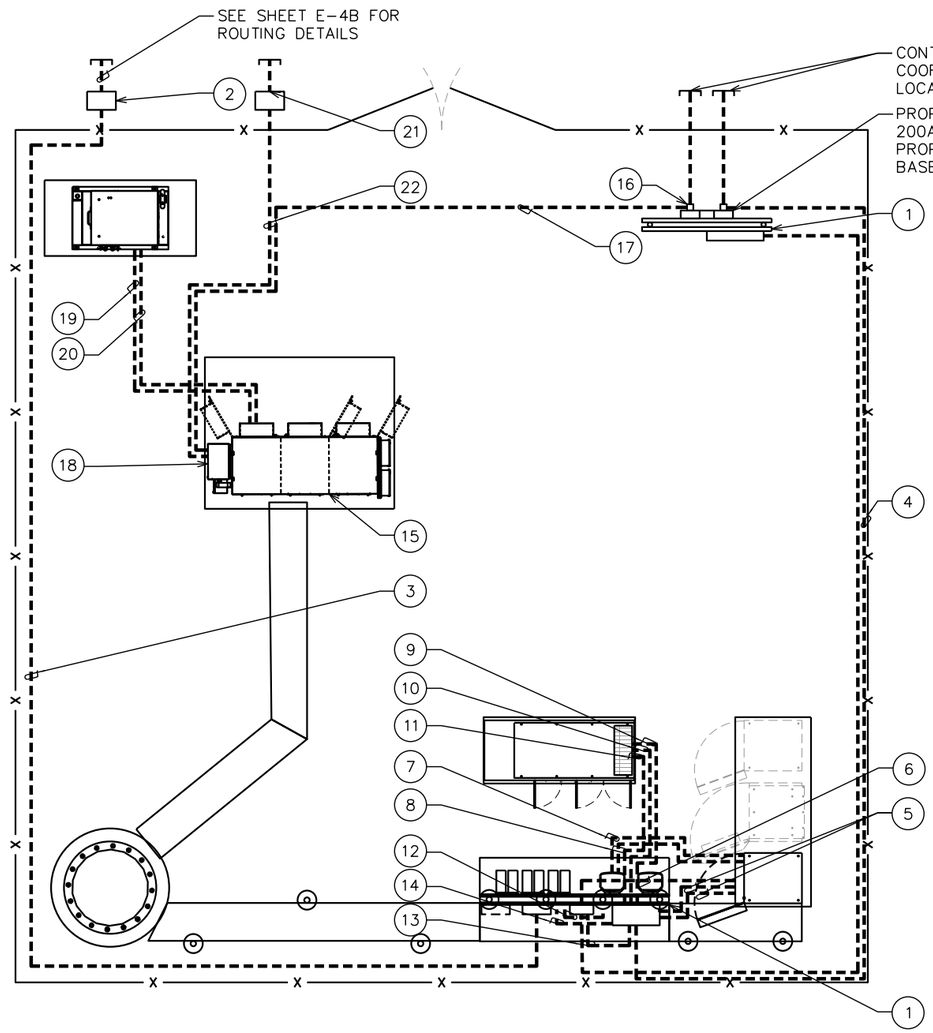
TEP#263516.598297

VZW LABELS:

1. VZW H-FRAME SERVICE RACK. SEE SHEET E-5A FOR DETAILS.
2. PROPOSED VZW FIBER HANDHOLE PERMANENTLY LABELED "VZW FIBER"
3. (2)-2" PVC TELCO CONDUIT, EACH WITH PULLSTRING. ALL CONDUITS SHALL UTILIZE LONG SWEEPS AT BENDS.
4. (1)-2" PVC CONDUIT FOR POWER
5. (2)-2" CONDUITS FOR RECTIFIERS & GFCI & (1)-1" CONDUIT FOR ALARM FROM ILC TO RBA84
6. (2)-2" TELCO CONDUIT FROM TELCO BOX TO RBA84
7. (1)-2" FLEX CONDUIT FOR FIBER FROM OVP TO RBA84
8. (1)-1½" FLEX CONDUIT FOR EVERY (6) RRU CIRCUITS FOR POWER FROM OVP TO RBA84
9. 1" CONDUIT FOR GENERATOR HEATER & BATTERY CHARGER FROM ILC TO GENERATOR
10. 1" CONDUIT FROM ILC TO GENERATOR FOR ALARM AND CONTROL WIRING
11. ILC TO GENERATOR (2" CONDUIT FOR POWER)
12. ½" CONDUIT TO AREA LIGHTS FROM J-BOX ON VZW H-FRAME
13. DISCONNECT TO ILC (2" CONDUIT FOR POWER)
14. (1)-½" CONDUIT WITH KILL SWITCH WIRING FROM ILC TO GENERATOR KILL SWITCH

AT&T LABELS:

15. PROPOSED AT&T WUC EQUIPMENT CABINET
16. PROPOSED 200A METER & DISCONNECT
17. (1) 2½" POWER CONDUIT FROM METER TO 200A LOAD CENTER
18. 200A LOAD CENTER
19. PROPOSED (2) 1" CONDUIT FOR CAT6
20. PROPOSED 2" POWER CONDUIT
21. PROPOSED FIBER MEET-ME POINT. LOCATION IS TO BE ESTABLISHED WITH THE LEC PRIOR TO INSTALLATION
22. (1) 4" TELCO CONDUIT W/ (3) 11/4" FLEX INTERDUCT & PULL STRING FOR FIBER POWER LEADS STUBBED UP IN FIBER HANDHOLE. CONTRACTOR TO COORDINATE SERVICE WITH LOCAL TELEPHONE COMPANY.



NOTES:

1. AREA LIGHT LITHONIA HFR 250M SLWA DNA LP1 CONTROL VIA CONTRACTOR PROVIDED MANUAL TIMER SWITCH (WEATHERPROOF).
2. POWER AND TELCO CONDUITS RECEIVING CONDUCTORS BY OTHERS TO HAVE PULL ROPES.
3. ALL TELCO CONDUITS ARE TO BE STUBBED IN D-MARC LOCATION.
4. ALL POWER CONDUITS ARE TO BE TERMINATED AT THE METER CENTER.
5. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO TRENCHING. ANY DAMAGE CAUSED TO THE EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. ALL CONDUITS SHALL BE INSTALLED PRIOR TO FINISH GRADING, GEOFABRIC, AND STONE INSTALLATION.
7. CONTRACTOR SHALL INSTALL SWEEPS AT ALL CONDUIT DIRECTION CHANGES UNLESS NOTED OTHERWISE.
8. RUN CONDUITS FROM ILC TO GENERATOR UNDERGROUND AND STUB UP CONDUITS MINIMUM 6" HIGH INSIDE GENERATOR BASE AND TERMINATE WITH MALE ADAPTER AND THREADED BUSHING.
9. WHEN ALL RRUs ARE GROUND MOUNTED, OMIT OVPs AND RUN FIBER/POWER FROM RBA84 DIRECTLY TO RRUs.
10. FIBER BRIDGE CONDUIT TO BE LEFT AS 5' LONG CAPPED STUB CONDUIT WHEN NO EXISTING HANDHOLE IS PRESENT.
11. CONTRACTOR TO VERIFY WITH CM WHICH EXISTING HANDHOLE (IF ANY) BELONGS TO FIBER PROVIDER.
12. CONTRACTOR TO INSTALL (2) PULL ROPES IN EACH FIBER CONDUIT.

POWER AND TELCO PLAN

SCALE: ⅛" = 1'-0"

0 8 16

SCALE IN FEET

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
TEP OPCO, LLC
5399

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 32280
MARK S. QUAKENBUSH
LICENSED

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

POWER & TELCO ROUTING PLAN

SHEET NUMBER: **E-4**

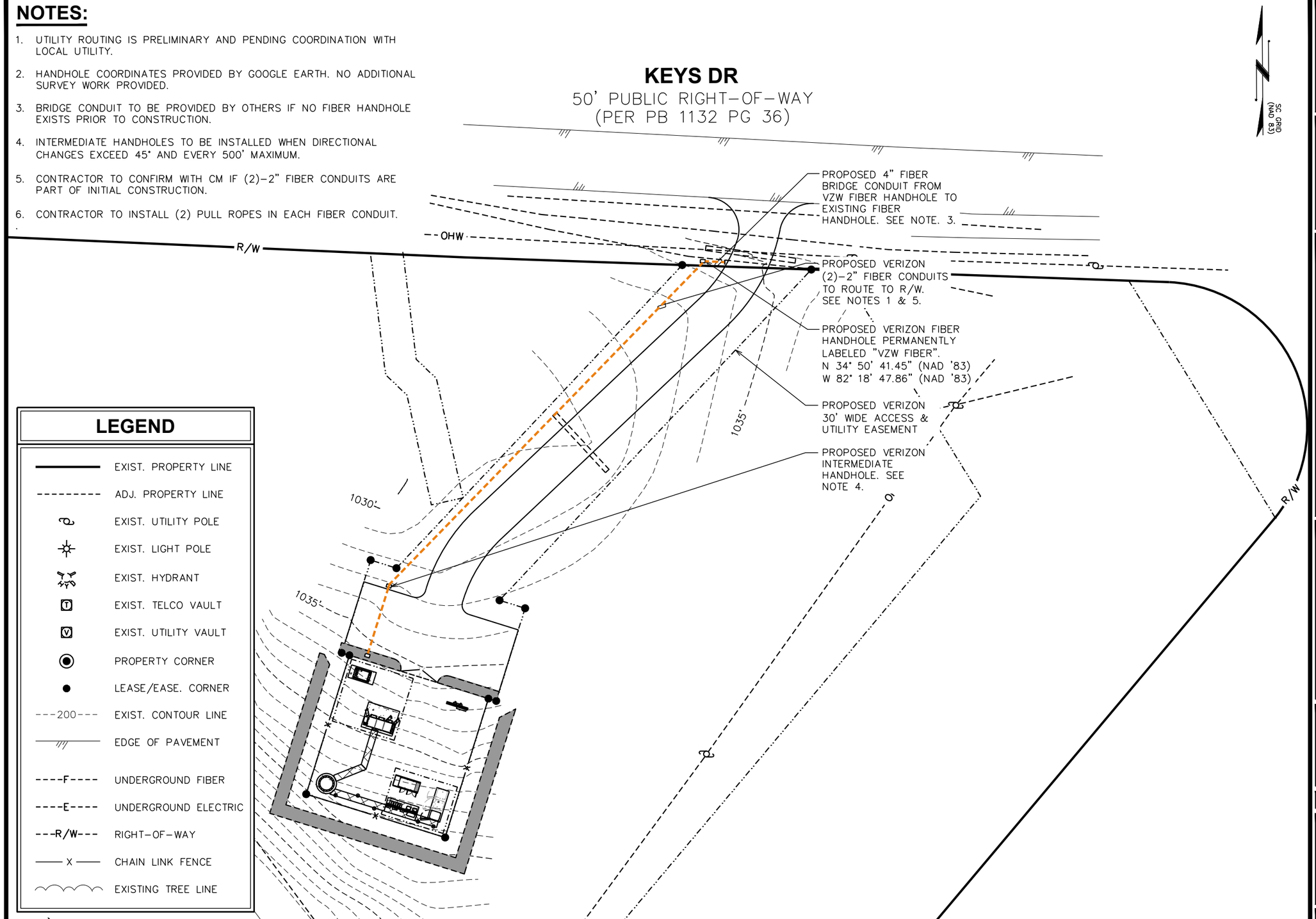
REVISION: **6**

TEP#:263516.598297

NOTES:

1. UTILITY ROUTING IS PRELIMINARY AND PENDING COORDINATION WITH LOCAL UTILITY.
2. HANDHOLE COORDINATES PROVIDED BY GOOGLE EARTH. NO ADDITIONAL SURVEY WORK PROVIDED.
3. BRIDGE CONDUIT TO BE PROVIDED BY OTHERS IF NO FIBER HANDHOLE EXISTS PRIOR TO CONSTRUCTION.
4. INTERMEDIATE HANDHOLES TO BE INSTALLED WHEN DIRECTIONAL CHANGES EXCEED 45° AND EVERY 500' MAXIMUM.
5. CONTRACTOR TO CONFIRM WITH CM IF (2)–2" FIBER CONDUITS ARE PART OF INITIAL CONSTRUCTION.
6. CONTRACTOR TO INSTALL (2) PULL ROPES IN EACH FIBER CONDUIT.

.



LEGEND

- EXIST. PROPERTY LINE
- ADJ. PROPERTY LINE
- EXIST. UTILITY POLE
- EXIST. LIGHT POLE
- EXIST. HYDRANT
- EXIST. TELCO VAULT
- EXIST. UTILITY VAULT
- PROPERTY CORNER
- LEASE/EASE. CORNER
- ---200--- EXIST. CONTOUR LINE
- EDGE OF PAVEMENT
- ----F---- UNDERGROUND FIBER
- ----E---- UNDERGROUND ELECTRIC
- ---R/W--- RIGHT–OF–WAY
- —— X —— CHAIN LINK FENCE
- EXISTING TREE LINE

VERIZON FIBER ROUTING

SCALE: 1" = 30'

0 30 60

SCALE IN FEET

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 32280
LICENSED
MARK S. QUAKENBUSH

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

VERIZON FIBER ROUTING

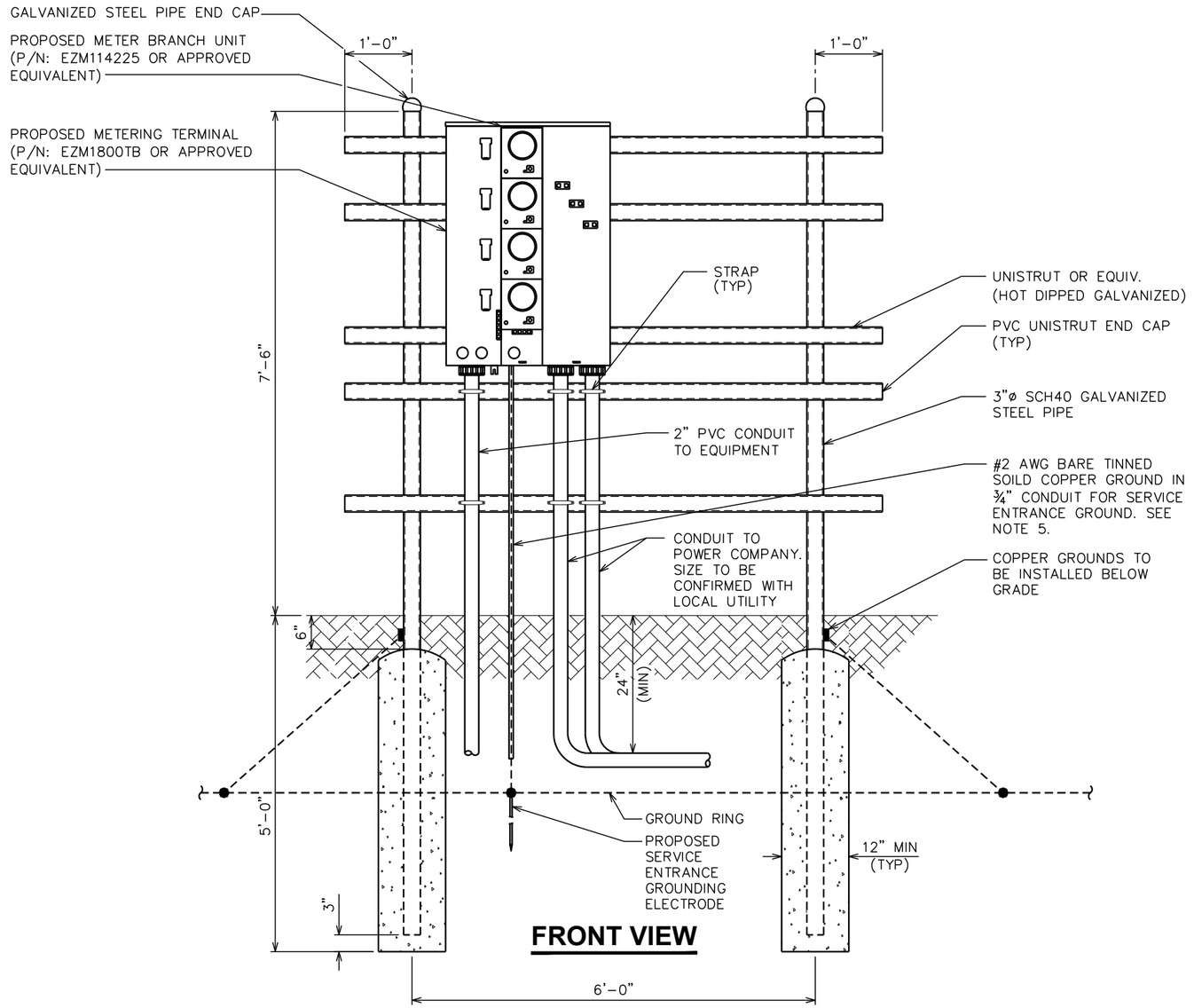
SHEET NUMBER: **E-4B**

REVISION: 6

TEP#:263516.598297

NOTES:

1. ELECTRIC SERVICE: 240/120V, 1ø, 3W, 800A UNDERGROUND SERVICE TO POLE RISER.
2. USE COPPER STRANDED, 600V, TYPE THW/THWN, WITH CROSS LINKED POLYETHYLENE INSULATION FOR #8 AWG AND LARGER WIRE.
3. UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC (MEET UL STANDARDS G51 AND NEMA TC2–1990). EXPOSED CONDUITS SHALL BE PVC UV RESISTANT OR RIGID GALVANIZED STEEL. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 36" RADIUS.
4. GROUNDING CONDUCTOR SHALL BE #2 AWG SOLID BARE TINNED COPPER UNLESS OTHERWISE NOTED.
5. GROUNDING ELECTRODE CONDUCTOR IS SIZED FOR SINGLE 200A SERVICE ONLY. IF METER BANK SHARES A COMMON NEUTRAL/GROUND POINT, CONTRACTOR WILL INSTALL (1) 3/0 COPPER GEC INSTEAD.



FRONT VIEW

SERVICE RACK DETAIL

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
TEP OPCO, LLC
5399

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 32280
MARK S. QUAKENBUSH
LICENSED

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

SERVICE RACK DETAILS

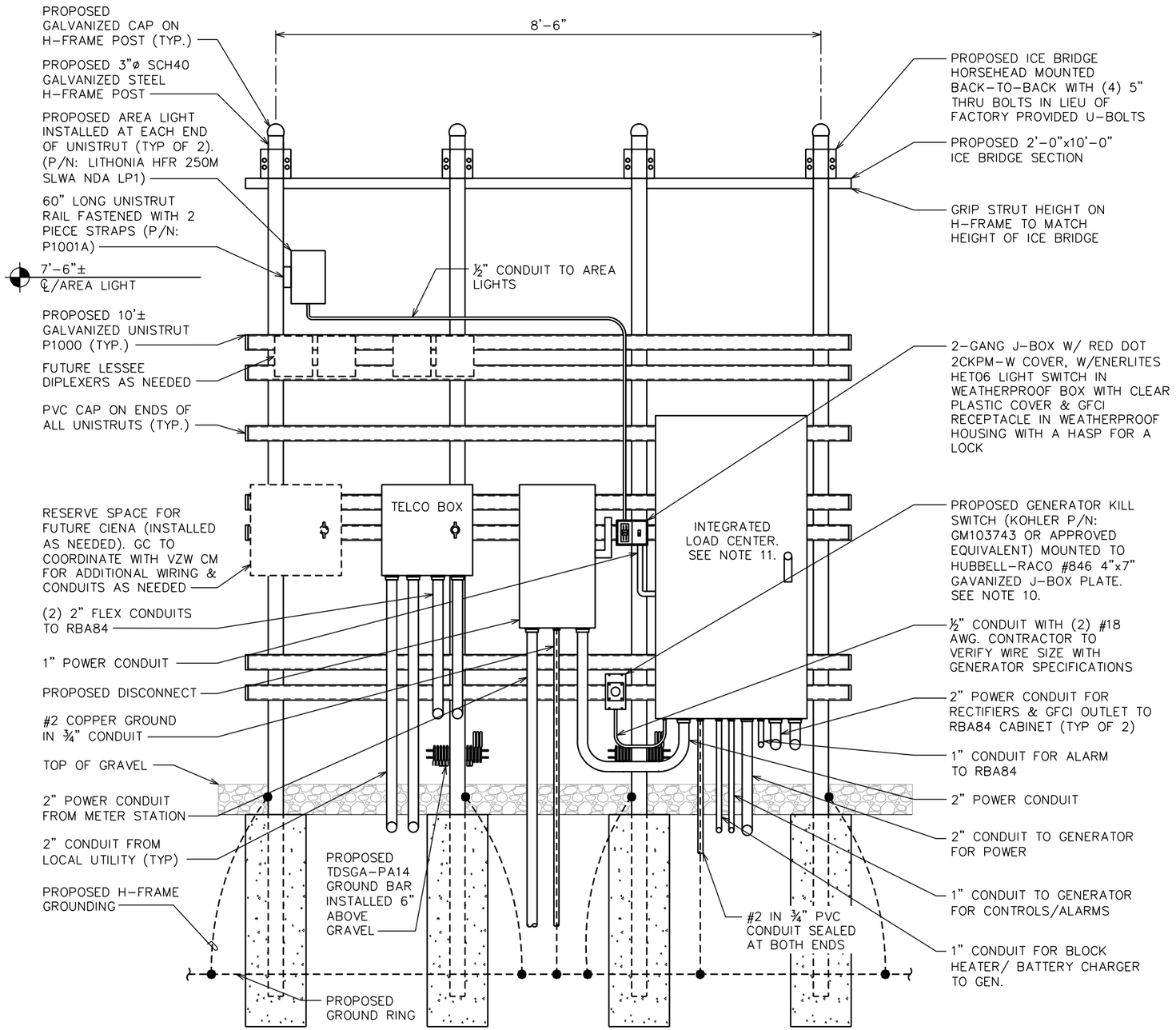
SHEET NUMBER: **E-5A**

REVISION: 6

TEP#: 263516.598297

NOTES:

1. ALL WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE, STATE BUILDING CODES AND THE LOCAL BUILDING CODES. ALL COMPONENTS SHALL BE U.L. LISTED.
2. REFER TO SHEET C-2 FOR EQUIPMENT LAYOUT AND EXACT LOCATION OF VERIZON H-FRAME.
3. CONTRACTOR TO COORDINATE WITH LOCAL UTILITY COMPANY FOR INSTALLATION OF NEW METER IN UTILITY H-FRAME.
4. COORDINATE EXACT LOCATION OF UNDERGROUND FEEDERS AND CIRCUITRY WITH THE OWNER.
5. CONTRACTOR SHALL COORDINATE EFFORTS WITH (LOCAL, ELECTRICAL) AUTHORITY HAVING JURISDICTION (AHJ) AND OTHER TRADES TO DETERMINE "FROST" LINE, AND TYPES OF RACEWAYS REQUIRED FOR INSTALLATION.
6. BOND ALL ELECTRICAL EQUIPMENT TO RACK.
7. DIMENSIONS SHOWN ARE APPROXIMATE AND MAY BE ALTERED IN THE FIELD AS APPROVED BY OWNER TO BETTER SUIT ACTUAL CONDITIONS OR EQUIPMENT RECEIVED.
8. FOR ANY METAL CONDUIT ENTERING AN ENCLOSURE WHERE A PRE-PUNCHED CONCENTRIC OR ECCENTRIC KNOCKOUT IS USED, THE CONTRACTOR SHALL ENSURE ADEQUATE BONDING BETWEEN THE METAL CONDUIT AND ENCLOSURE BY INSTALLING A BONDING JUMPER AROUND THE CONCENTRIC OR ECCENTRIC KNOCKOUT.
9. CONTRACTOR SHALL INSURE THAT NO OPERABLE DEVICE SHALL EXCEED 6'-6" TO CENTER LINE OF DEVICE.
10. GENERATOR STOP SWITCH TO BE FURNISHED BY VERIZON AND INSTALLED BY GC.
11. ILC TO BE FURNISHED BY VZW AND INSTALLED BY GC.



FRONT VIEW

VERIZON H-FRAME DETAIL I

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 32280
MARK S. QUAKENBUSH

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

VERIZON H-FRAME DETAIL I

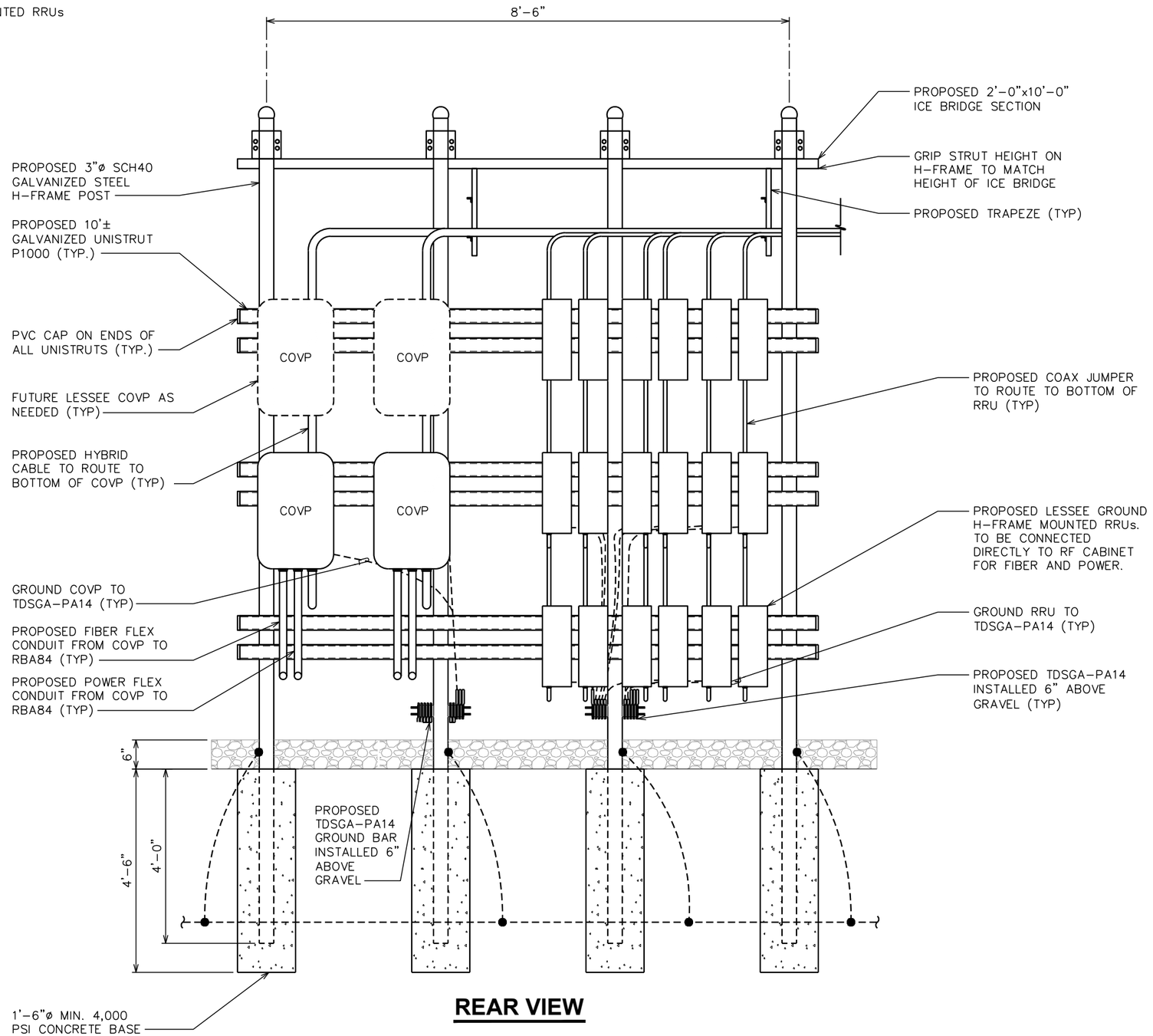
SHEET NUMBER: **E-5B**

REVISION: 6

TEP#263516.598297

NOTE:

PROPOSED VERIZON GROUND MOUNTED RRUs
TO BE INSTALLED AS REQUIRED.



REAR VIEW

VERIZON H-FRAME DETAIL II

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 32280
MARK S. QUAKENBUSH

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

VERIZON H-FRAME DETAIL II

SHEET NUMBER: **E-5C**

REVISION: **6**

TEP#:263516.598297

GROUNDING NOTES:

1. THE VZW GROUND RING SHALL CONSIST OF #2 AWG BARE SOLID TINNED COPPER (STC) CONDUCTOR, UNLESS NOTED OTHERWISE, BURIED AT 30" BELOW FINISHED GRADE (OR BELOW FROST LINE). LOCATE 24" MINIMUM AND 36" MAXIMUM FROM EQUIPMENT AREA AND FROM TOWER FOUNDATION. ALL CONNECTIONS SHALL BE MADE USING A PARALLEL TYPE EXOTHERMIC WELD, UNLESS NOTED OTHERWISE.

2. INSTALL VZW GROUND RODS AS SHOWN AND AS REQUIRED. GROUND RODS TO BE COPPER CLAD STEEL, 5/8" DIAMETER AND 10FT IN LENGTH. SPACING BETWEEN GROUND RODS SHALL BE 10FT MINIMUM AND 15FT MAXIMUM. TOP OF GROUND ROD TO BE 30" MINIMUM BELOW GRADE (OR BELOW FROST LINE). BOND TOP OF GROUND ROD TO GROUND WIRE WITH EXOTHERMIC WELD. DO NOT EXOTHERMICALLY WELD ANYTHING TO GROUND ROD EXCEPT GROUND WIRE WHICH PASSES OVER TOP OF GROUND ROD (CLAMPED CONNECTIONS TO GROUND ROD PER TOWER MANUFACTURERS DETAILS ARE ACCEPTABLE).

3. VZW EQUIPMENT GROUND RING SHALL HAVE A MINIMUM OF 4 GROUND RODS, INSTALLED AT THE CORNERS OF THE GROUND RING PLUS ADDITIONAL RODS AS REQUIRED TO COMPLY WITH THE SPACING REQUIREMENTS. TOWER GROUND RING SHALL HAVE A MINIMUM OF 3 GROUND RODS, EXCEPT USE 4 RODS AT A MONOPOLE TOWER. WHERE SPREAD TOWER FOOTING WOULD PREVENT GROUND RODS FROM BEING DRIVEN INTO SOIL ADJACENT TO TOWER, PROVIDE VERTICAL 1" DIAMETER PVC SLEEVES EMBEDDED IN FOOTING TO ALLOW INSTALLATION OF GROUND RODS.

4. VZW EQUIPMENT GROUND RING AND TOWER GROUND RING SHALL BE BONDED TOGETHER WITH TWO #2 STC GROUND LEADS, TYPICALLY ONE ON EACH SIDE OF ICE BRIDGE.

5. BOND TOWER TO TOWER GROUND RING AT THREE LOCATIONS WITH #2 STC GROUND LEAD. SELF SUPPORT TOWERS SHALL HAVE EACH LEG BONDED TO GROUND RING, MONOPOLES AND GUYED TOWERS SHALL HAVE GROUND LEADS EQUALLY SPACED AROUND TOWER. EXOTHERMICALLY WELD GROUND LEADS TO TOP OF BASE PLATES, OR ATTACH TO TOWER USING TOWER MANUFACTURER PROVIDED DETAIL.

6. PROVIDE #2 STC RADIALS FROM THE TOWER GROUND RING TO EACH FENCE CORNER POST. RADIALS SHALL HAVE GROUND RODS AS PER THE REQUIRED SPACING. THE GROUND ROD AT THE END OF EACH RADIAL SHALL BE 24" MAXIMUM FROM FENCE CORNER POST. EQUIPMENT AREA GROUND RING AND CONNECTING GROUND LEADS [BETWEEN EQUIPMENT AREA AND TOWER GROUND RINGS] MAY BE USED AS PART OF THE RADIAL GOING TO THE FENCE CORNER POST CLOSEST TO THE EQUIPMENT AREA.

7. MINIMUM BEND RADIUS FOR #2 AWG GROUND WIRE IS 12", EXCEPT USE 24" FOR TOWER GROUND RINGS AND EQUIPMENT PAD GROUND RINGS.

8. GROUND ALL EXTERIOR EXPOSED METAL OBJECTS. USE TWO HOLE LUGS FOR CONNECTION TO FLAT METAL SURFACES. USE ONLY STAINLESS STEEL HARDWARE ON ALL MECHANICAL CONNECTIONS. CLEAN ALL SURFACES (AND STRIP PAINTED SURFACES) TO BARE BRIGHT METAL PRIOR TO MAKING GROUND CONNECTIONS. APPLY ANTI-OXIDE COMPOUND TO ALL CONNECTIONS. APPLY ZINC RICH PAINT (COLD GALV.) TO ALL EXOTHERMIC WELDS, AND TO ANY METAL EXPOSED BY CLEANING, STRIPPING, GRINDING, CUTTING OR DRILLING.

9. ALL GROUNDING CONDUCTORS ABOVE GRADE SHALL BE RUN IN 3/4" FLEXIBLE PVC CONDUIT. CONDUIT SHALL BEGIN WITHIN 3/4" OF ABOVE GROUND CONNECTION POINT, SHALL EXTEND 24" BELOW GRADE MINIMUM, AND SHALL BE FILLED WITH SEALANT AT ABOVE GROUND CONNECTION POINT. SECURE CONDUIT EVERY 24" ON VERTICAL RUNS AND EVERY 36" ELSEWHERE WITH NON-METALLIC TIES.

10A. AT GUYED AND SELF SUPPORT TOWERS MOUNT VZW TDSGA-PA14 TOWER BOTTOM GROUND BAR ON DEDICATED POST DIRECTLY BELOW COAX CABLES COMING OFF TOWER. POST TO BE 3.5" OD GALVANIZED SCHEDULE 40 PIPE WITH GALVANIZED PIPE CAP. TOP OF POST TO BE 78" ABOVE GRADE. EMBED POST 30" MINIMUM IN 12" DIAMETER BY 36" DEEP MINIMUM CONCRETE FOOTING WITH TOP OF FOOTING 6" BELOW GRADE. IF TOWER FOUNDATION OBSTRUCTS AUGERED FOOTING, USE POST WITH 10" SQUARE GALVANIZED STEEL FLANGE PLATE WELDED TO BOTTOM AND BOLT FLANGE TO TOP OF CONCRETE TOWER FOOTING.

10B. AT MONOPOLE TOWERS CLAMP VZW TDSGA-BC14 TOWER BOTTOM GROUND BAR DIRECTLY TO TOWER. IF RUNNING COAX INSIDE MONOPOLE, CLAMP ONTO BOTTOM LIP OF EXIT PORT. IF BANDING COAX TO OUTSIDE OF TOWER, CLAMP ONTO STEEL ANGLE WHICH IS BANDED TO TOWER. BOND TDSGA-BC14 TO TOWER GROUND RING WITH TWO #2 STC LEADS LUGGED TO GROUND BAR AND EXOTHERMICALLY WELDED TO GROUND RING.

11. AT VZW EQUIPMENT AREA, INSTALL VZW TDSGA-PA14 EXTERIOR GROUND BAR (THRU-BOLTED STYLE) AT BASE OF (2) INTERIOR H-FRAME POSTS AND AT TOP OF ICE BRIDGE POST WHICH IS NEAREST TO (BUT CLOSER TO TOWER THAN) THE COAX CABLE TERMINATION. MOUNT GROUND BAR TO H-FRAME POSTS AT 6" ABOVE GRAVEL AND TO ICE BRIDGE POST AT 6FT ABOVE GRAVEL.

12. ALL VZW ICE BRIDGE SECTIONS ARE TO BE JUMPERED TOGETHER WITH #2 WIRE, EITHER BARE TINNED COPPER OR GREEN INSULATED STRANDED. ICE BRIDGE SHALL BE GROUNDED AT EACH END WITH #2 STC WIRE LUGGED TO ICE BRIDGE AND EXOTHERMICALLY WELDED TO UPPER PORTION OF NEAREST ICE BRIDGE POST. ICE BRIDGE SECTIONS ABOVE H-FRAME SHALL BE BONDED TO EACH OTHER WITH JUMPERS AT EACH END - THIS ASSEMBLY WILL BE CONSIDERED AS A SINGLE ICE BRIDGE SECTION FOR GROUNDING PURPOSES.

13. BOND EACH VZW ICE BRIDGE POST, H-FRAME POST OR DEDICATED GROUNDING POST TO BURIED GROUNDING SYSTEM WITH #2 STC LEAD EXOTHERMICALLY WELDED TO POST BELOW TOP OF GRAVEL AND EXOTHERMICALLY WELDED TO GROUND RING. EACH POST TO HAVE SEPARATE GROUND LEAD DIRECTLY TO GROUND RING - DO NOT DAISY CHAIN POSTS TOGETHER.

14. BOND EACH VZW RF CABINET TO EQUIPMENT GROUND RING WITH #2 AWG TINNED SOLID BARE COPPER CONDUCTOR LUGGED TO CABINET BODY AND EXOTHERMICALLY WELDED TO GROUND RING. LUG TO CABINET BODY USING LOCATION AT WHICH STUDS ON CABINET CHASSIS HAVE DIRECT GROUND WIRE CONNECTION TO CABINET INTERNAL GROUND BAR. RUN CONDUIT AND CONDUCTOR ACROSS BACK OF CABINET (DO NOT RUN TOWARDS NEAREST CORNER OF CABINET AND THEN BEND GROUND WIRE SHARPLY), ACROSS CONCRETE PAD BELOW CABLE LADDER, THEN DOWN INTO GRAVEL AREA.

15. BOND EACH VZW BATTERY CABINET (WHERE USED) TO GROUND RING WITH #2 AWG TINNED SOLID BARE COPPER CONDUCTOR LUGGED TO CABINET BODY AND EXOTHERMICALLY WELDED TO GROUND RING. RUN GROUND LEAD IN FLEX CONDUIT ALONG BACK OF RBA84 CABINET, ACROSS CONCRETE PAD BELOW CABLE LADDER, THEN DOWN INTO GRAVEL AREA. CONNECT TWO HOLE LUG TO BACK OF CABINET AT FACTORY PROVIDED GROUNDING STUDS.

16. BOND VZW GENERATOR TO GROUND RING WITH #2 STC AT TWO DIAGONALLY OPPOSITE LOCATIONS BY DRILLING AND BOLTING TWO HOLE LUG TO FINS ON GENERATOR BASE STRUCTURE. GROUND LEADS SHOULD TAKE SHORTEST PATH ACROSS CONCRETE PAD TO GRAVEL AREA, THEN CONTINUE TO GROUND RING.

17. WHERE VZW PROPANE TANK IS INSTALLED TO FUEL GENERATOR, BOND PROPANE TANK TO GROUND RING WITH A SINGLE #2 STC CLAMPED TO FILLER PIPE OF PROPANE TANK AND EXOTHERMICALLY WELDED TO GROUND RING. GROUND LEAD SHOULD RUN TO TANK SUPPORT AND TAKE SHORTEST PATH ACROSS CONCRETE PAD TO GRAVEL AREA, THEN CONTINUE TO GROUND RING. IF PROPANE TANK FUEL LINE IS METALLIC AND CROSSES EQUIPMENT GROUND RING, BOND FUEL LINE TO EQUIPMENT GROUND RING WHERE THE TWO LINES CROSS WITH A SINGLE #2 STC CLAMPED TO FUEL LINE AND EXOTHERMICALLY WELDED TO GROUND RING.

18. BOND VZW GPS ANTENNA AND GPS ANTENNA MOUNT TO TSDGA GROUND BAR AT BOTTOM OF H-FRAME POST WITH #2 GREEN INSULATED STRANDED GROUND WIRE.

19. PROVIDE TWO GROUND RODS OUTSIDE GATES OF COMPOUND. DISTANCE BETWEEN GROUND RODS SHALL MATCH WIDTH OF GATE OPENING, AND DISTANCE FROM FENCE SHALL MATCH LENGTH OF LONGEST INDIVIDUAL GATE LEAF. BOND GATE POSTS TOGETHER WITH #2 STC LEAD WHICH RUNS PAST AND CONNECTS TO GROUND RODS OUTSIDE GATES.

20. BOND EACH GATE POST WITH #2 STC TO NEAREST PORTION OF GROUNDING SYSTEM INSIDE COMPOUND.

21. BOND EACH GATE TO GATE POST WITH FLEXIBLE INSULATED OR BRAIDED #4/0 COPPER STRAP. EXOTHERMICALLY WELD STRAP TO BOTH GATE AND GATE POST.

22. ANY METAL FENCE POST WITHIN 6FT OF A GROUNDED METAL OBJECT SHALL BE BONDED TO THE NEAREST GROUND RING. ANY METAL FENCE WITHIN 6FT OF A GROUND RING SHALL HAVE THE LINE POSTS BONDED TO THE GROUND RING AT 20FT MAXIMUM INTERVALS AS MEASURED ALONG THE LENGTH OF THE FENCE.

23. WHERE VZW GROUND BASED RRU'S, RAYCAP OVP'S OR DIPLEXERS ARE INSTALLED AT THE EQUIPMENT AREA, BOND EACH COMPONENT TO NEAREST TDSGA GROUND BAR BELOW THE COMPONENT WITH #2 GREEN INSULATED STRANDED GROUND WIRE. SINGLE HOLE LUG OR RING TYPE CONNECTOR IS SUITABLE FOR CONNECTION TO GROUNDING STUD ON EACH COMPONENT.

24. NOTIFY VZW & AT&T CM TO INSPECT GROUND RING BEFORE BACKFILLING. CONTRACTOR SHALL HIRE A 3RD PARTY TO PERFORM AN IEEE81 FALL OF POTENTIAL METHOD GROUND TEST. MAXIMUM ALLOWABLE RESISTANCE TO GROUND IS 5 OHMS. PROVIDE ADDITIONAL GROUND SYSTEM COMPONENTS AS REQUIRED TO ACHIEVE THIS VALUE.

25. REFER TO TOWER GROUNDING DIAGRAM AND NOTES FOR GROUND SYSTEM REQUIREMENTS ON THE TOWER.

26. GROUNDING OF ALL ELECTRICAL EQUIPMENT SHALL BE AS PER NEC, MUNICIPAL AND UTILITY COMPANY REQUIREMENTS.

27. #2 AT&T AWG BARE SOLID BARE TINNED COPPER WIRE GROUND RING

28. PROPOSED AT&T BOTTOM TOWER BUS BAR

29. PROPOSED AT&T ICE BRIDGE BUS BAR

30. #2 AT&T AWG BARE SOLID TINNED COPPER WIRE BETWEEN BUS BARS

31. PROPOSED AT&T ICE BRIDGE

32. PROPOSED AT&T ICE BRIDGE POST (TYP)

33. #2 AT&T AWG ICE BRIDGE BOND BURIED 30" BFG (TYP)

34. AT&T HVAC GROUND. MECHANICAL CONNECTIONS AT HVAC UNITS ABOVE GRADE AS ALLOWED BY CODE

35. PROPOSED AT&T WUC EQUIPMENT CABINET

36. #2 AT&T AWG BOND BETWEEN GENERATOR AND GROUNDING RING

GROUNDING NOTES

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 32280
LICENSED
MARK S. QUAKENBUSH

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

GROUNDING NOTES

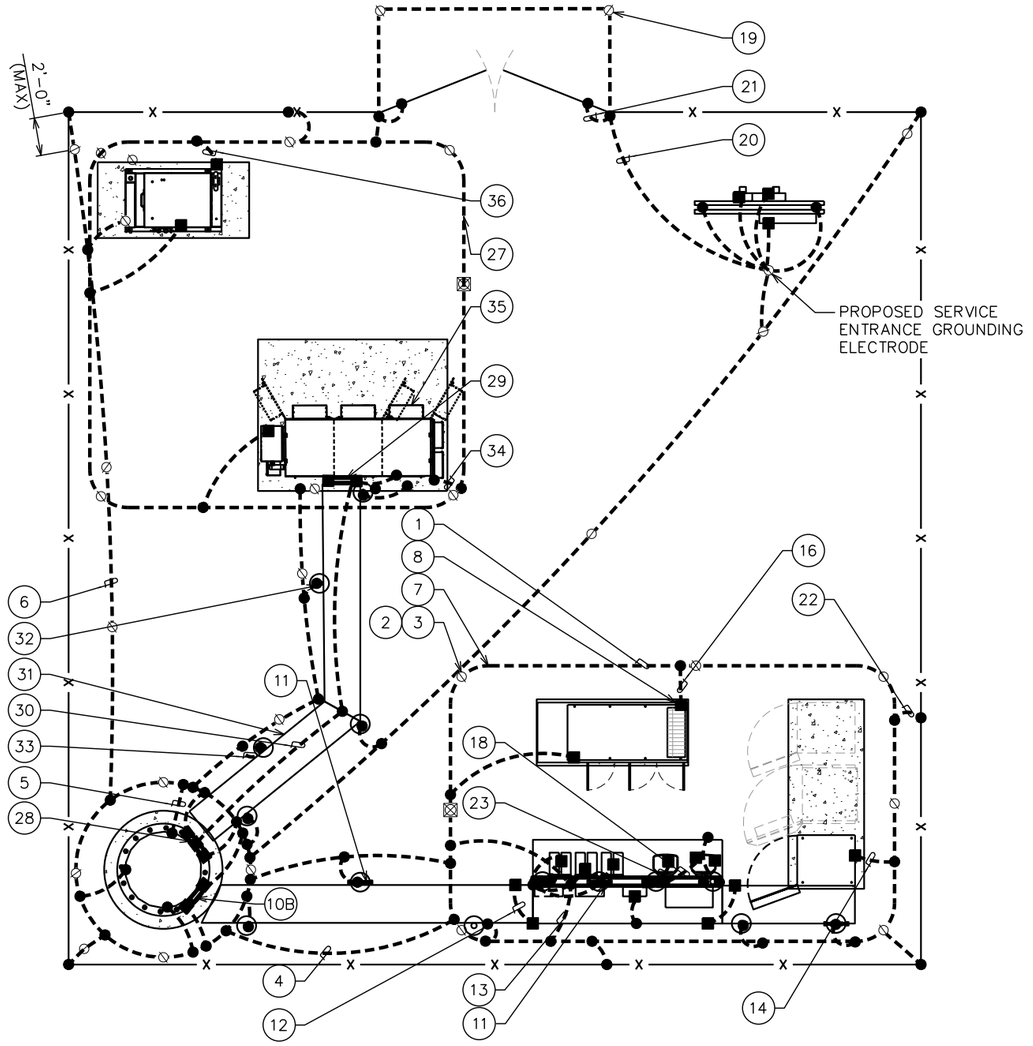
SHEET NUMBER: **E-6**

REVISION: 6

TEP#: 263516.598297

DRAWING NOTE:

REFER TO SHEET E-6 FOR ELECTRICAL GROUNDING NOTES AND REQUIREMENTS.



LEGEND

●	CADWELD
⦸	GROUND ROD
⊠	GROUND ROD W/ INSPECTION WELL
■	LUG FOR EQUIPMENT GROUNDING
- - - - - - - -	GROUND RING
●—	GROUND BAR

GROUNDING PLAN

SCALE: 1/8" = 1'-0"

0 8 16

SCALE IN FEET

NC GRID (NAD 83)

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 32280
MARK S. QUAKENBUSH

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

GROUNDING PLAN

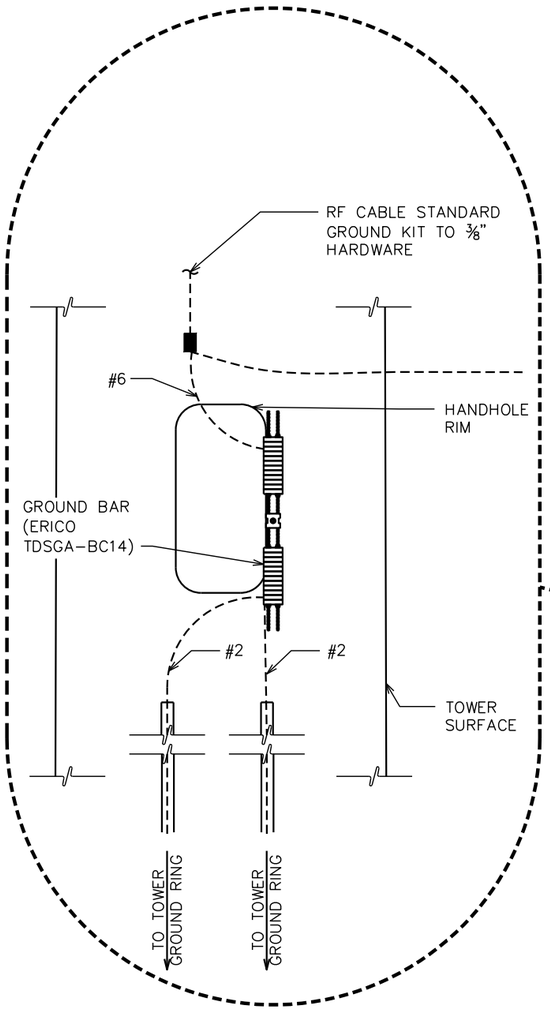
SHEET NUMBER: **E-7**

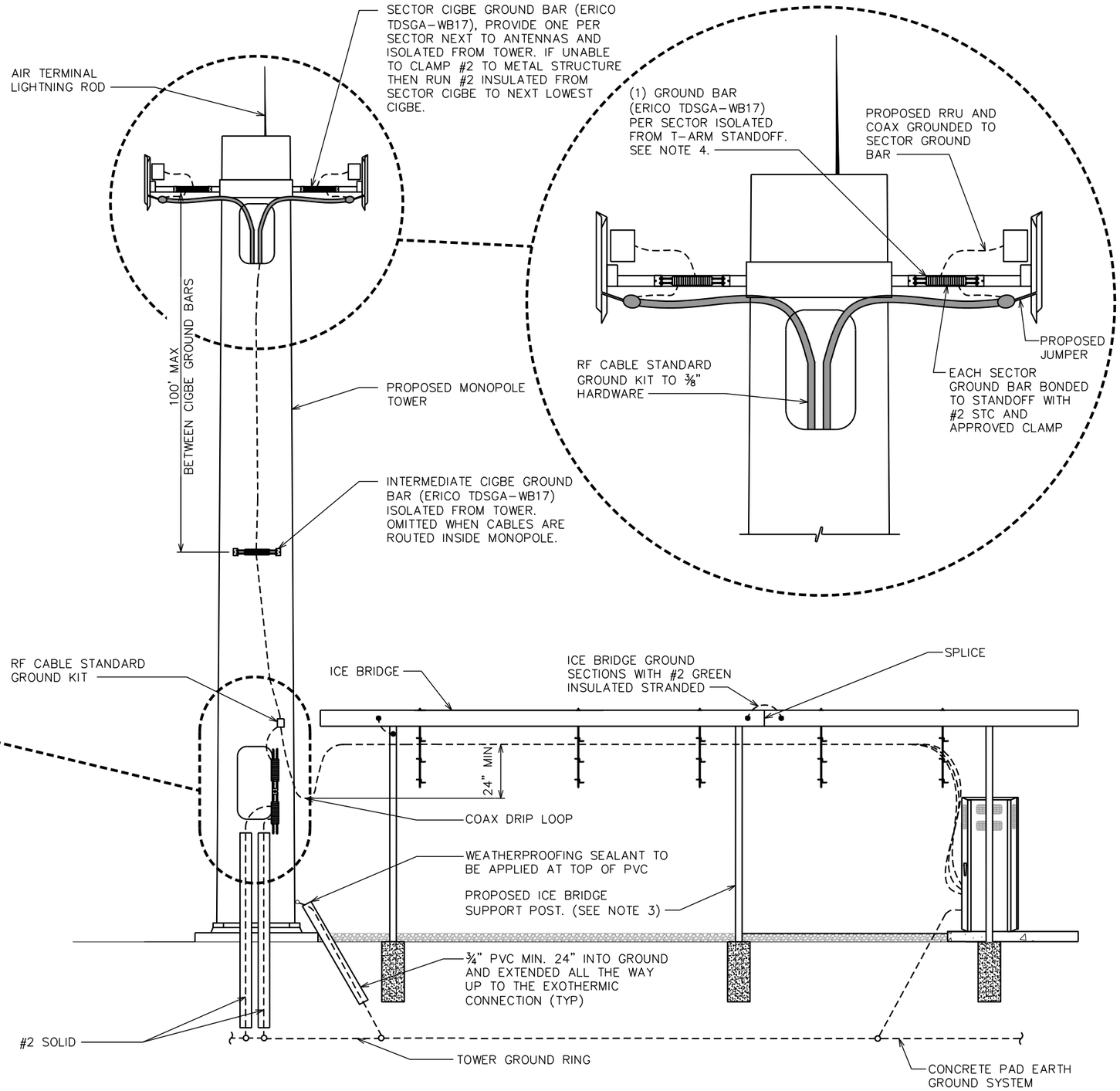
REVISION: **6**

TEP#: 263516.598297

NOTES:

1. MINIMUM BEND RADIUS OF #2 SOLID CONDUCTOR IS 12", EXCEPT MINIMUM FOR 24" FOR BUILDING OR TOWER GROUND RING.
2. ALL GROUND BARS SHALL BE INSTALLED WITH TAMPER RESISTANT MOUTING HARDWARE.
3. TOP OF ICE BRIDGE POST FOOTINGS SHALL BE SET 6" BELOW TOP OF GRAVEL AND CADWELD LEADS TO POSTS BELOW TOP OF GRAVEL.
4. SECTOR GROUND BARS ARE TO BE ISOLATED FROM TOWER STEEL, BUT THEN BONDED TO TOWER STEEL WITH #2 STC AND APPROVED CLAMP. SEE SHEET E-9 FOR ERICO TDSGA-WB17 GROUND BAR DETAILS.





ICE BRIDGE, COAX, STANCHION, AND TOWER GROUNDING DETAIL

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION TEP OPCO, LLC 5399

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32280 MARK S. QUAKENBUSH

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

ICE BRIDGE & TOWER GROUNDING DETAIL

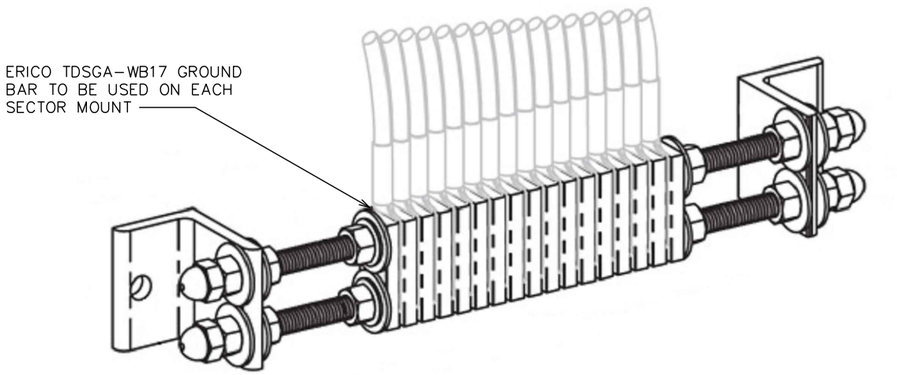
SHEET NUMBER: **E-8**

REVISION: 6

TEP#263516.598297

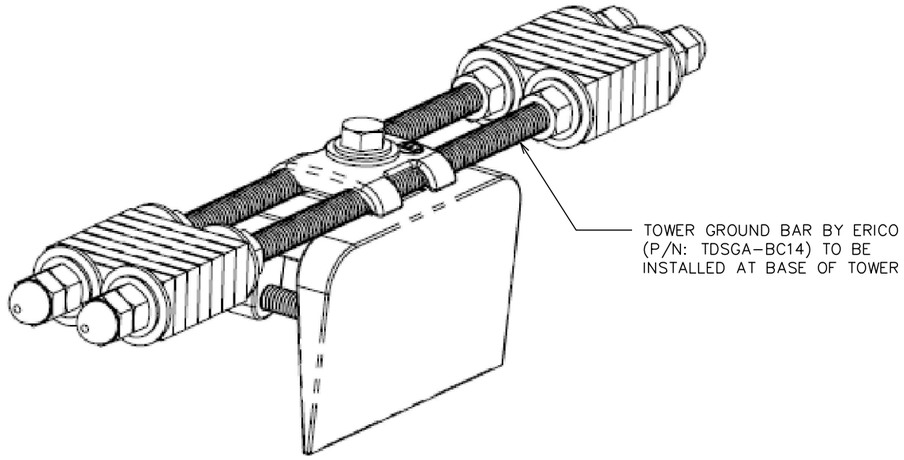
NOTES:

1. GROUND BAR SHALL BE SIZED TO ACCOMMODATE ALL GROUNDING CONNECTIONS REQUIRED PLUS PROVIDE 50% SPARE CAPACITY
2. ALL GROUND BARS WILL BE ISOLATED FROM THE TOWER EXCEPT TOWER BOTTOM GROUND BAR ON MONOPOLES.
3. DRAWINGS SHOWN FOR REFERENCE ONLY AND MAY NOT REPRESENT FINAL CONFIGURATION.



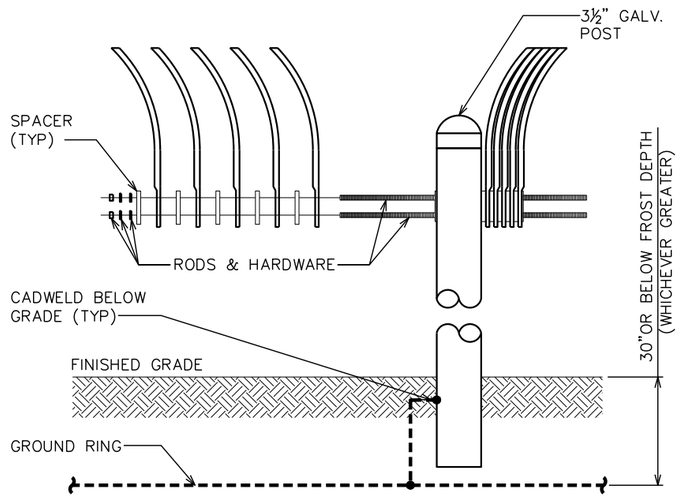
ERICO TDSGA-WB17 GROUND BAR

SCALE: N.T.S.



ERICO TDSGA-BC14 GROUND BAR

SCALE: N.T.S.



ERICO TDSGA-PA14 GROUND BAR

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

GROUND BAR DETAILS

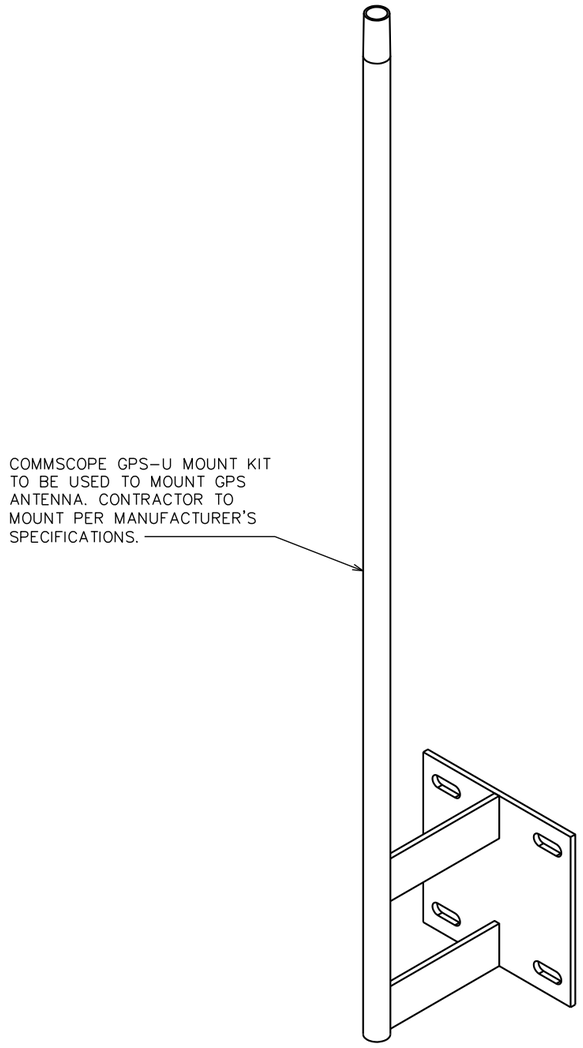
SHEET NUMBER: **E-9**

REVISION: 6

TEP#:263516.598297

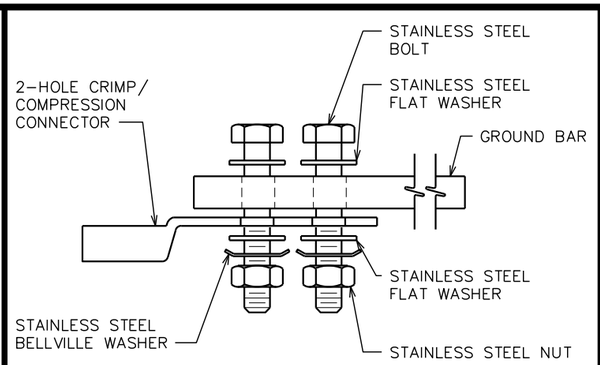
NOTES:

1. CONTRACTOR TO USE COMMSCOPE GPS-U MOUNT KIT TO MOUNT GPS ANTENNA. MOUNT PER MANUFACTURER'S SPECIFICATIONS.
2. EQUIPMENT INSTALLER IS RESPONSIBLE FOR INSTALLATION OF ANTENNA, MOUNTS, & COAX.
3. CONTRACTOR IS RESPONSIBLE FOR GPS MOUNTING PIPE, GROUND AND CLAMP AROUND THE MAST FOR THE GPS.

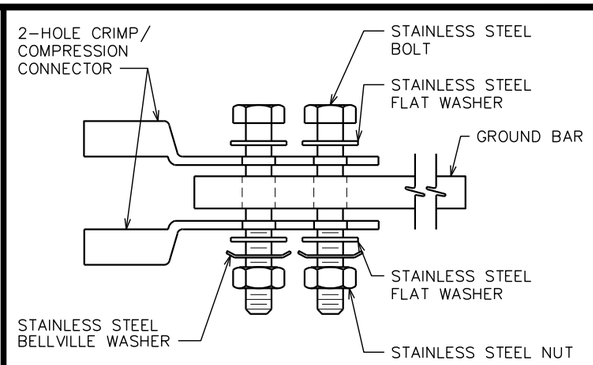


GPS MOUNT DETAIL

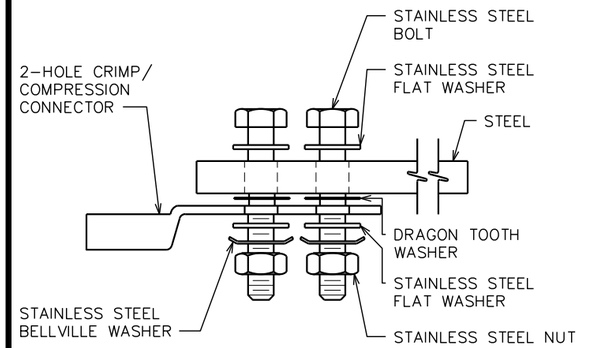
SCALE: N.T.S.



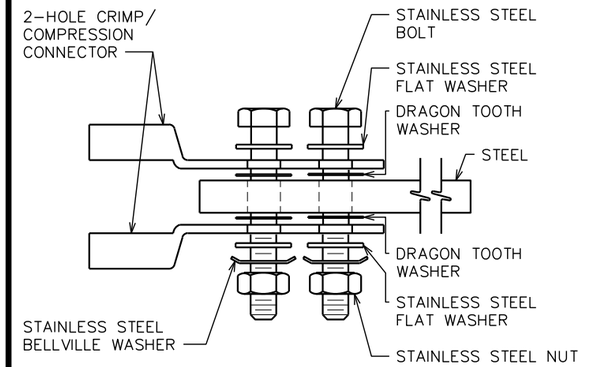
SINGLE CONNECTOR AT GROUND BARS



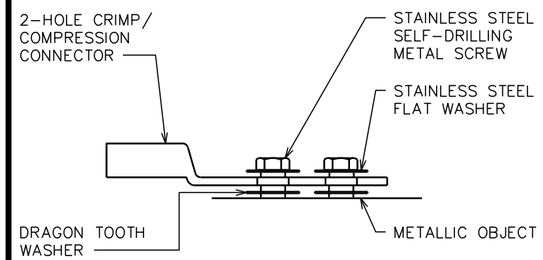
BACK TO BACK CONNECTOR AT GROUND BARS



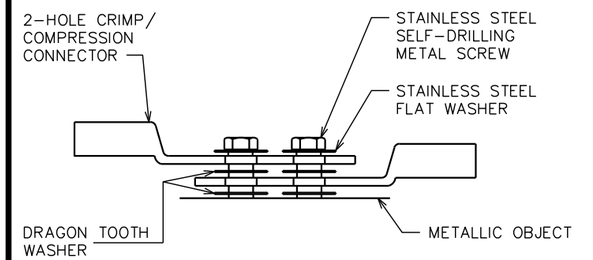
SINGLE CONNECTOR AT STEEL OBJECTS



BACK TO BACK CONNECTOR AT STEEL OBJECTS



SINGLE CONNECTOR AT METALLIC/STEEL OBJECTS



BACK TO BACK CONNECTOR AT METALLIC/STEEL OBJECTS

NOTES:

1. CHOOSE BOLT LENGTH TO ALLOW A MIN. OF TWO THREADS EXPOSED.
2. BURNISH MOUNTING SURFACE TO REMOVE PAINT IN THE AREA OF THE CONNECTOR.
3. APPLY ANTI-OXIDANT COMPOUND TO MATING SURFACE OF CONNECTOR AND WIPE OFF EXCESS COMPOUND.
4. APPLY CLEAR HEAT SHRINK OVER ENTIRE LENGTH OF LABEL FOR PROTECTION. (REFER TO CONDUCTOR LABELS SECTION.)

CONNECTOR AND HARDWARE DETAIL

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 32280
LICENSED
MARK S. QUAKENBUSH

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

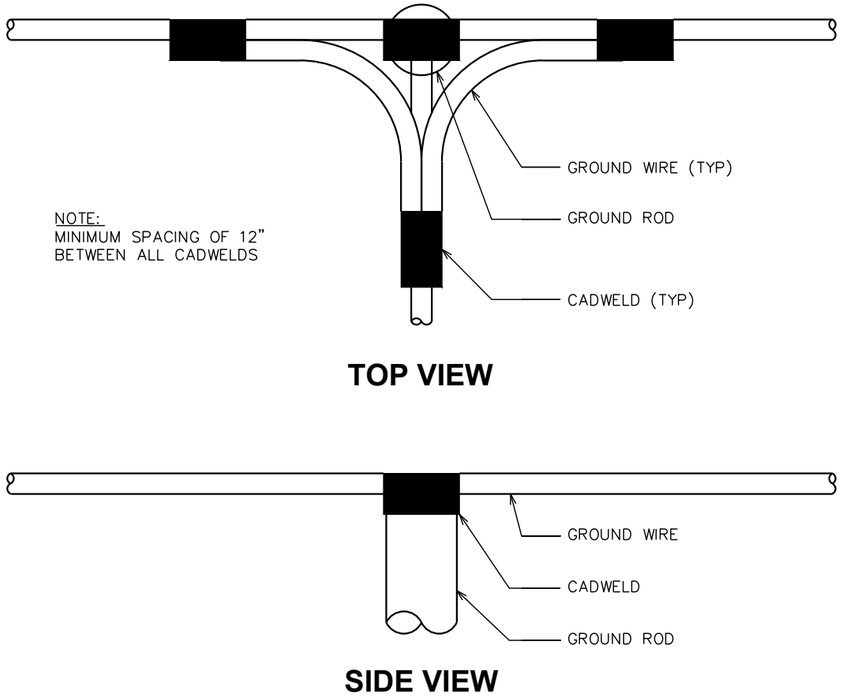
SHEET TITLE:

GROUNDING DETAILS I

SHEET NUMBER: **E-10**

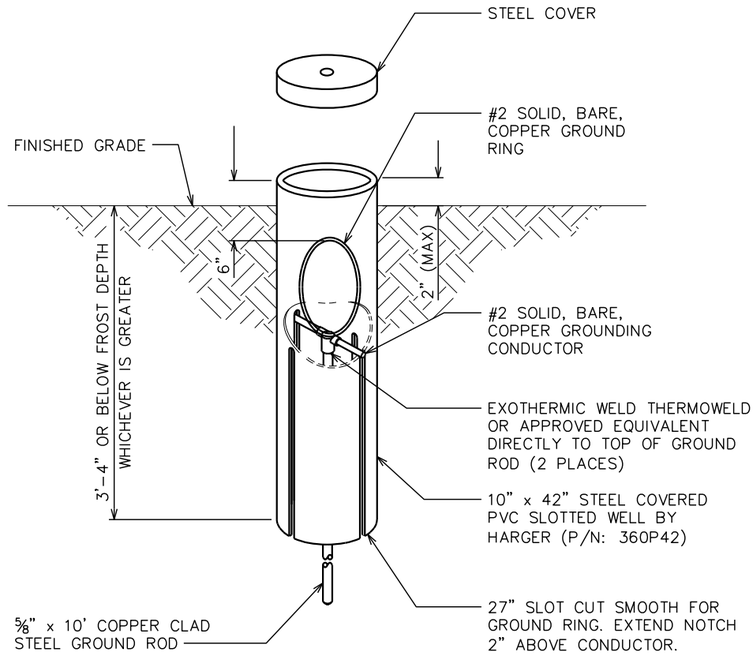
REVISION: **6**

TEP#:263516.598297



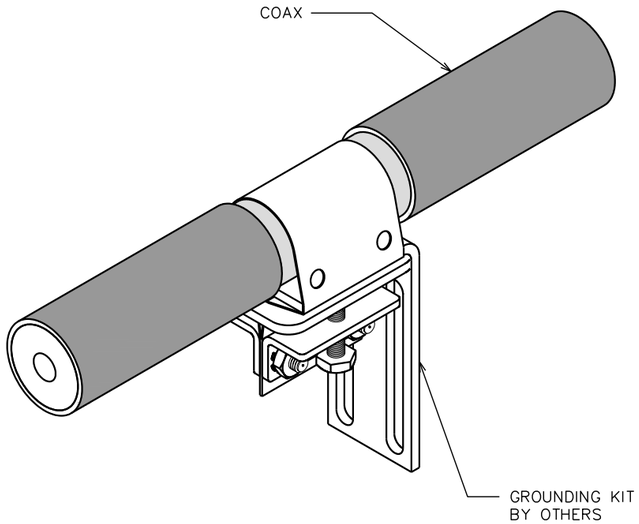
CADWELD GROUNDING DETAIL

SCALE: N.T.S.



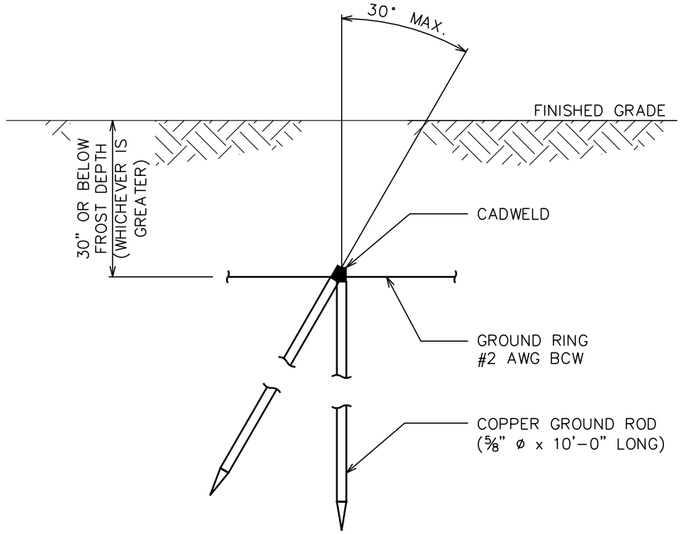
GROUND ROD WITH INSPECTION WELL

SCALE: N.T.S.



INTERIOR CABLE SHIELD

SCALE: N.T.S.



COPPER-CLAD STEEL GROUND ROD

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

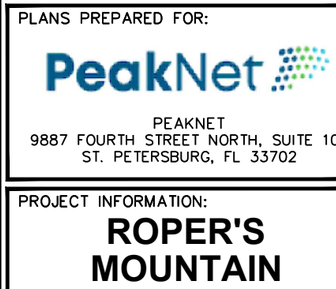
1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION TEP OPCO, LLC 5399

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:



January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

GROUNDING DETAILS II

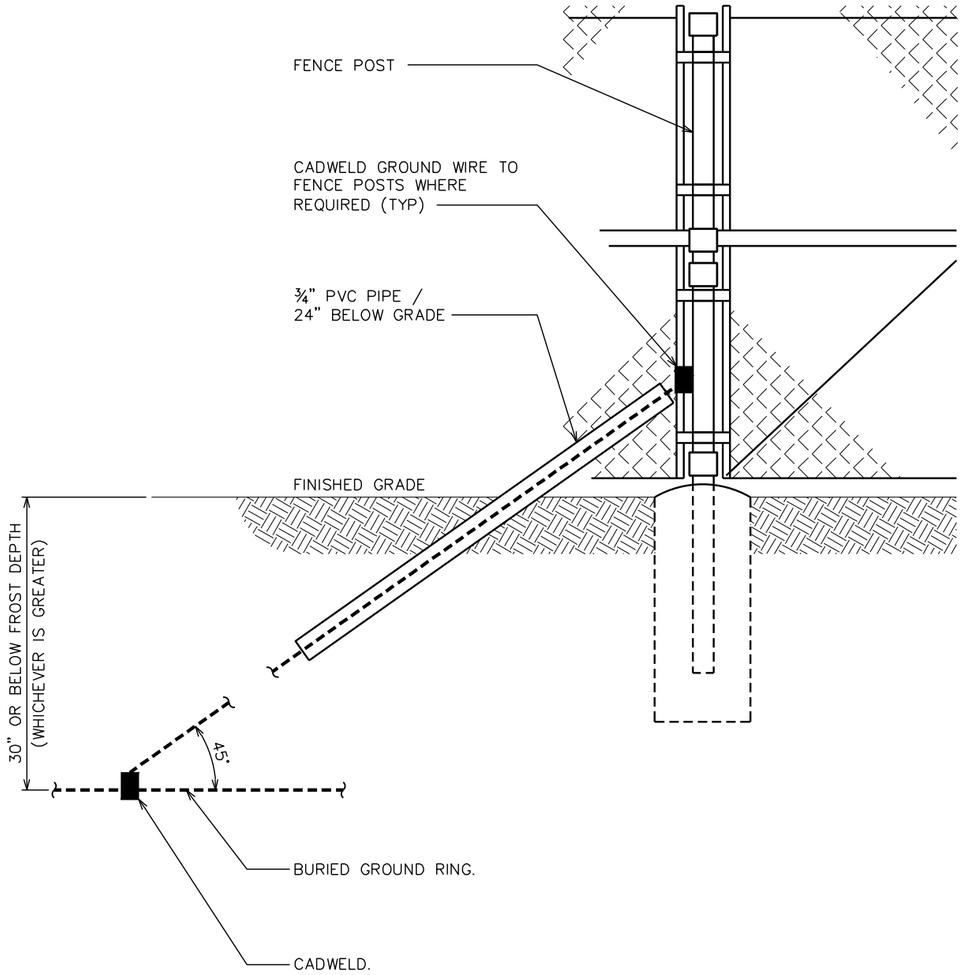
SHEET NUMBER: **E-11**

REVISION: **6**

TEP#: 263516.598297

NOTE:

FROST DEPTH FOR GREENVILLE COUNTY IS 12 INCHES.

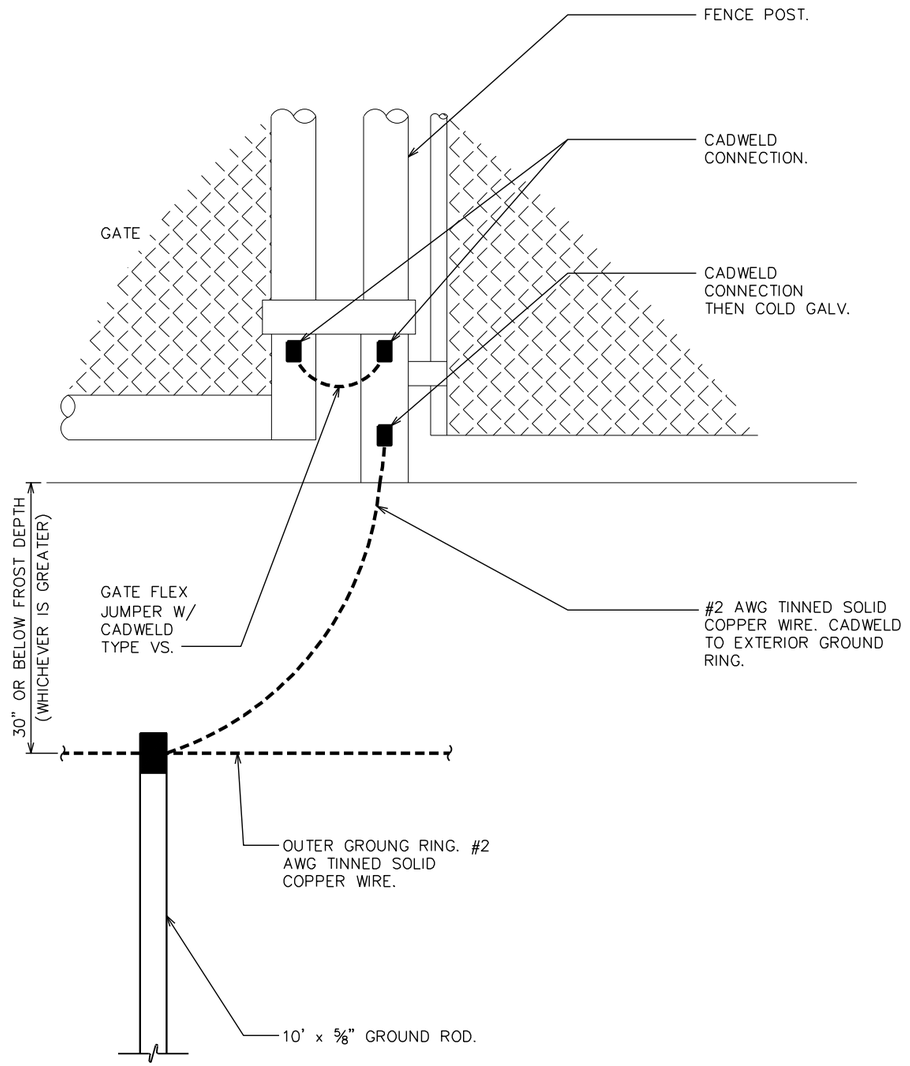


GATE POST GROUNDING

SCALE: N.T.S.

NOTE:

FROST DEPTH FOR GREENVILLE COUNTY IS 12 INCHES.



FENCE GROUNDING

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION TEP OPCO, LLC 5399

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 32280 MARK S. QUAKENBUSH

February 03, 2022

REV	DATE	ISSUED FOR:
7	02-03-22	CONSTRUCTION
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

GATE & FENCE GROUNDING DETAILS

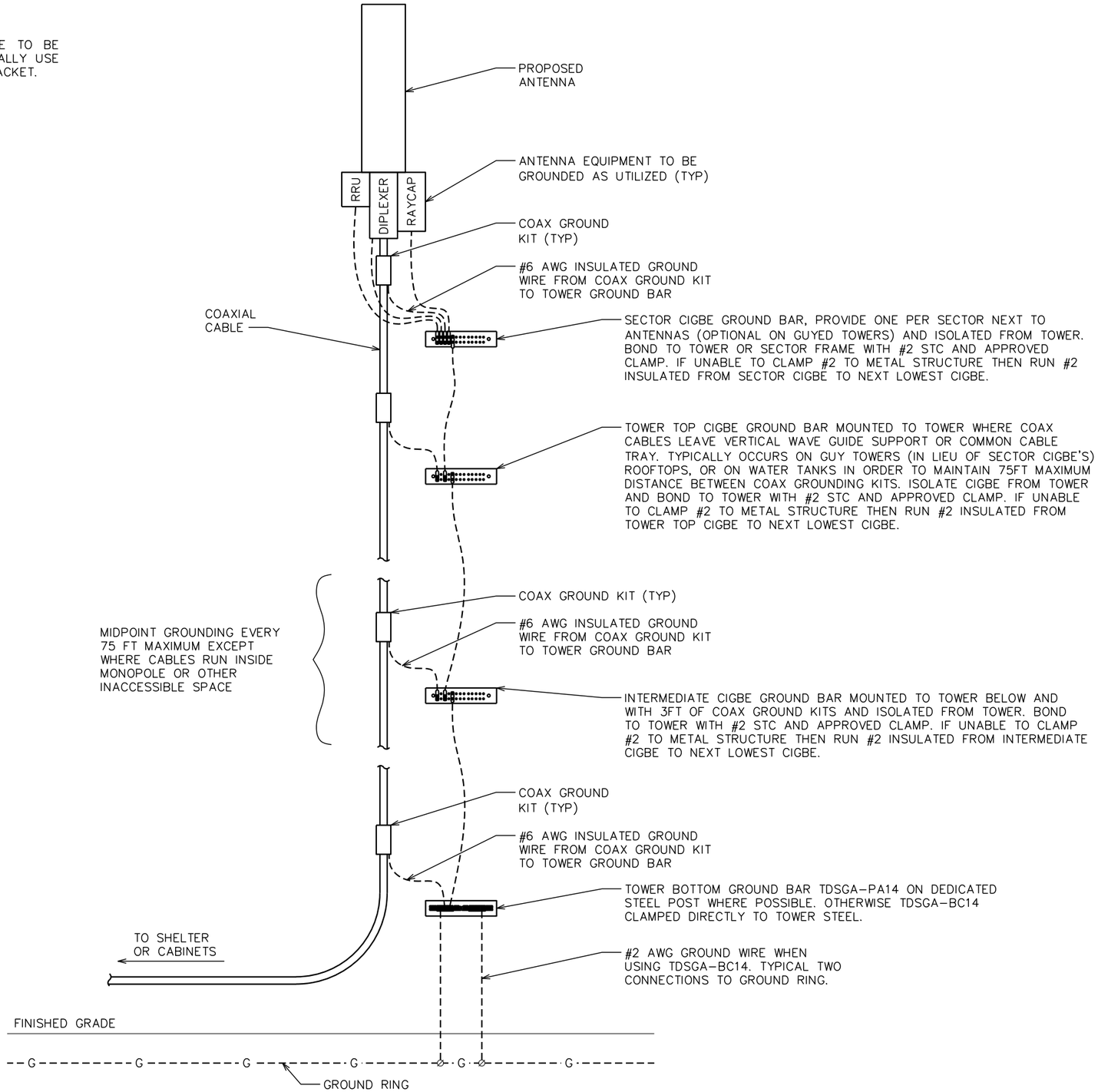
SHEET NUMBER: **E-12**

REVISION: 7

TEP#263516.598297

NOTE:

ALL CIGBE GROUND BARS ON TOWER ARE TO BE ERICO TDSGA OR APPROVED EQUAL. TYPICALLY USE TDSGA-WB17 ISOLATED FROM UNISTRUT BRACKET.



COAX/TOWER GROUNDING SCHEMATIC

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 32280
MARK S. QUAKENBUSH

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

COAX/TOWER GROUNDING SCHEMATIC

SHEET NUMBER: **E-13**

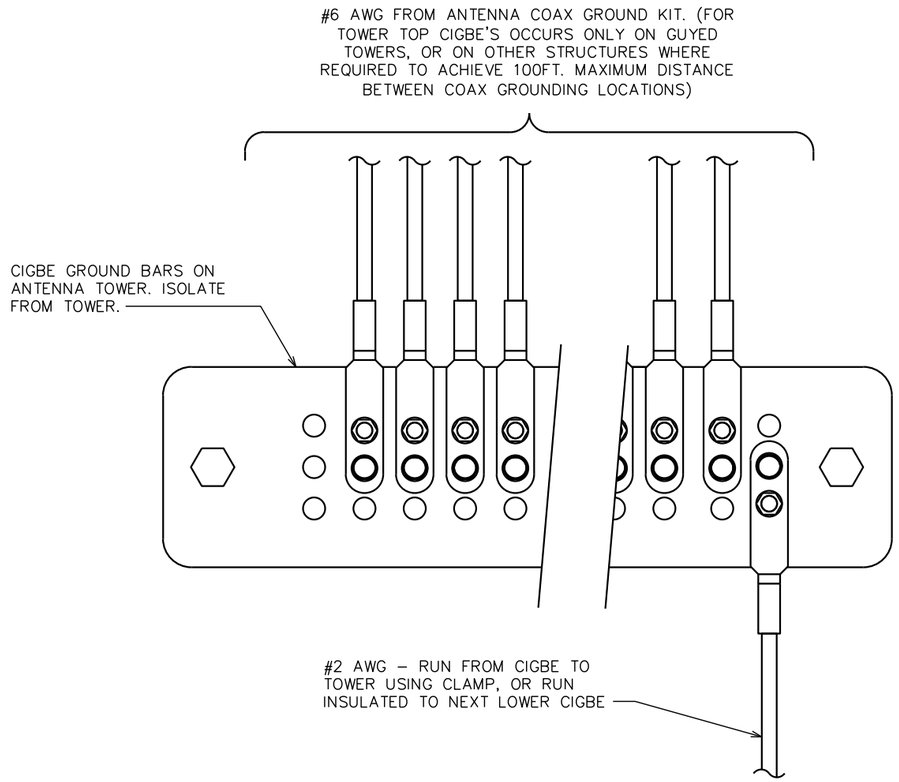
REVISION: 6

TEP#:263516.598297

NOTES:

1. ALL CIGBE GROUND BARS ON TOWER ARE TO BE ERICO TDSGA. TYPICALLY USE TDSGA-WB17 ISOLATED FROM UNISTRUT BRACKET.

2. IF CIGBE CANNOT BE BONDED DIRECTLY TO TOWER AND CANNOT BE CONNECTED TO TOWER WITH #2 AWG AND CLAMP (OR CADWELD), THEN RUN #2 BLACK INSULATED GROUND LEAD FROM CIGBE DOWN TO NEXT LOWER CIGBE. SECURE GROUND LEAD WITH NON-METALLIC TIES AT SAME SPACING AS COAX SUPPORTS.



ANTENNA GROUND WIRE INSTALLATION

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA
TEP OPCO, LLC
5399
CERTIFICATE OF AUTHORIZATION

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 32280
LICENSED
MARK S. QUAKENBUSH

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

ANTENNA GROUND WIRE INSTALLATION

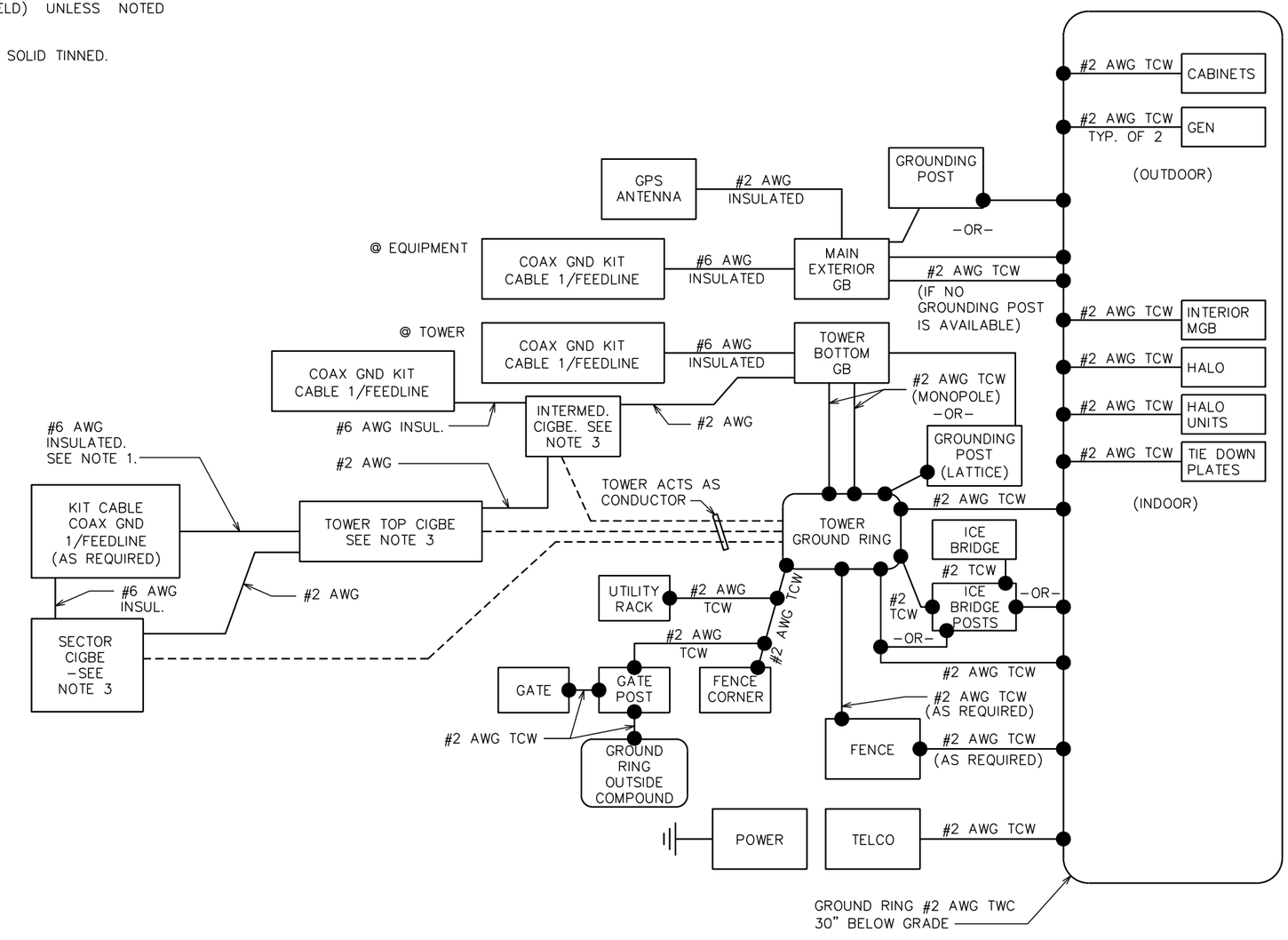
SHEET NUMBER: **E-14**

REVISION: **6**

TEP#: 263516.598297

NOTES:

1. CONNECT COAX GROUND KITS DIRECTLY TO TOWER TOP CIGBE ONLY AS NOTED ON ANTENNA GROUND WIRE INSTALLATION ON SHEET E-13.
2. FOR GROUNDING CONNECTIONS AND DETAILS, SEE SITE GROUNDING PLAN.
3. TOWER GROUND BARS WILL BE ISOLATED FROM TOWERS BUT BONDED TO TOWER WITH #2 STC AND CLAMP (OR CADWELD) UNLESS NOTED OTHERWISE.
4. ALL #2 AWG TCW MUST BE SOLID TINNED.



GROUNDING SYSTEM SINGLE LINE DIAGRAM

SCALE: N.T.S.

PLANS PREPARED FOR:

PeakNet

PEAKNET
9887 FOURTH STREET NORTH, SUITE 100
ST. PETERSBURG, FL 33702

PROJECT INFORMATION:

ROPER'S MOUNTAIN

1040 KEYS DRIVE
GREENVILLE, SC 29615
(GREENVILLE COUNTY)

PLANS PREPARED BY:

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
TEP OPCO, LLC
5399

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 32280
MARK S. QUAKENBUSH

January 18, 2022

REV	DATE	ISSUED FOR:
6	01-18-22	CONSTRUCTION
5	12-10-21	PRELIMINARY
4	11-10-21	PRELIMINARY
3	10-27-21	PRELIMINARY

DRAWN BY: DAO | CHECKED BY: TDS

SHEET TITLE:

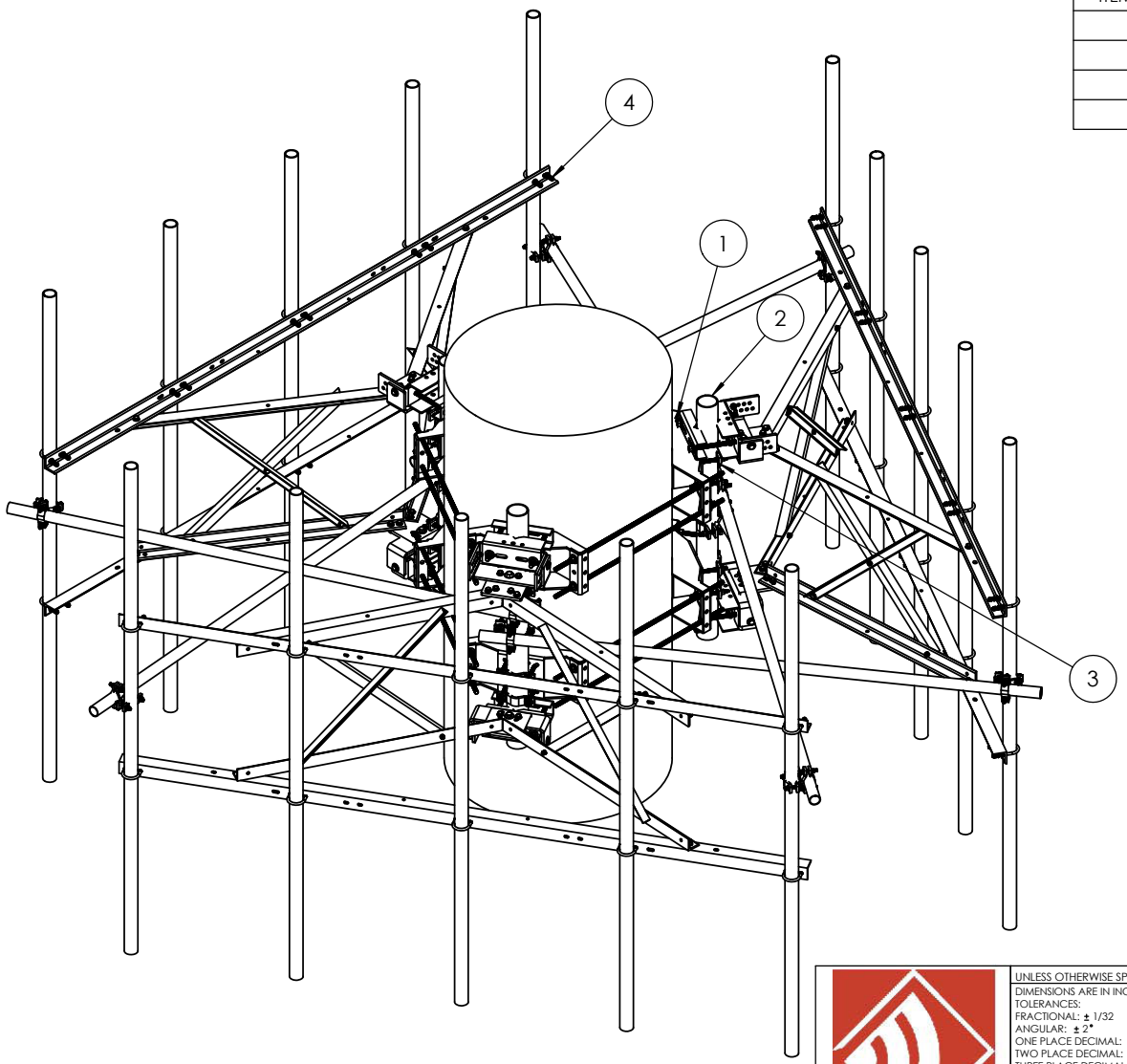
GROUNDING SYSTEM SINGLE LINE DIAGRAM

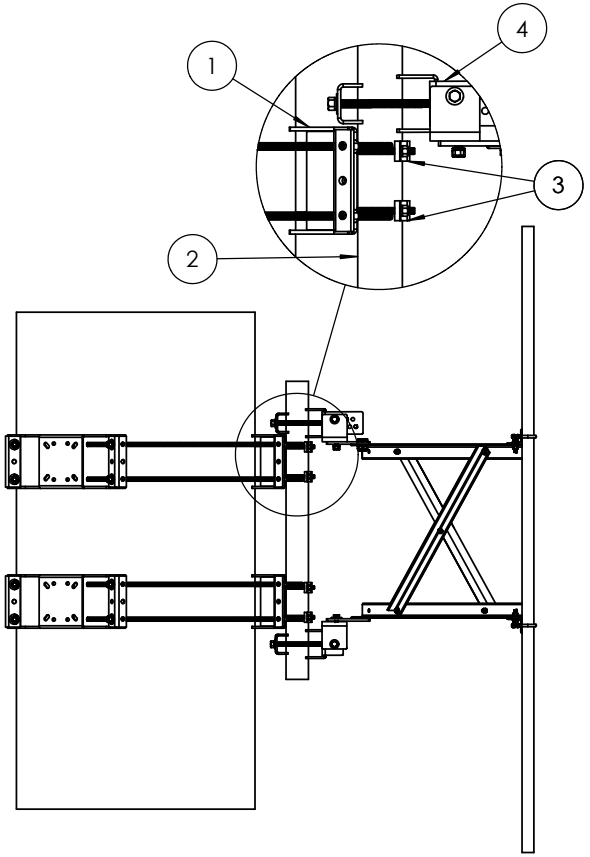
SHEET NUMBER: **E-15**

REVISION: **6**

TEP#: 263516.598297

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	T1503KT48A	Universal Ring Mount, 10" - 48"	2
2	P1500KT5	Pipe , 4.5" OD x5', HDG	3
3	T1004KT	Pipe mount kit for RM, 1-1/2"-5-1/2" OD	6
4	T1672KT12	Sector Frame, 12' Face (ATT WLL)	3





KENWOOD TELECOM
3431 Novis Pointe Acworth, Ga 30101
(770) 975-0500 office (770) 974-5100 fax

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: ± 1/32
ANGULAR: ± 2°
ONE PLACE DECIMAL: ± .06
TWO PLACE DECIMAL: ± .03
THREE PLACE DECIMAL: ± .010

INTERPRET GEOMETRIC TOLERANCING PER:

MATERIAL

FINISH

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	KAR	10/28/16
CHECKED		
ENG APPR.		
MFG APPR.		

KENWOOD TELECOM

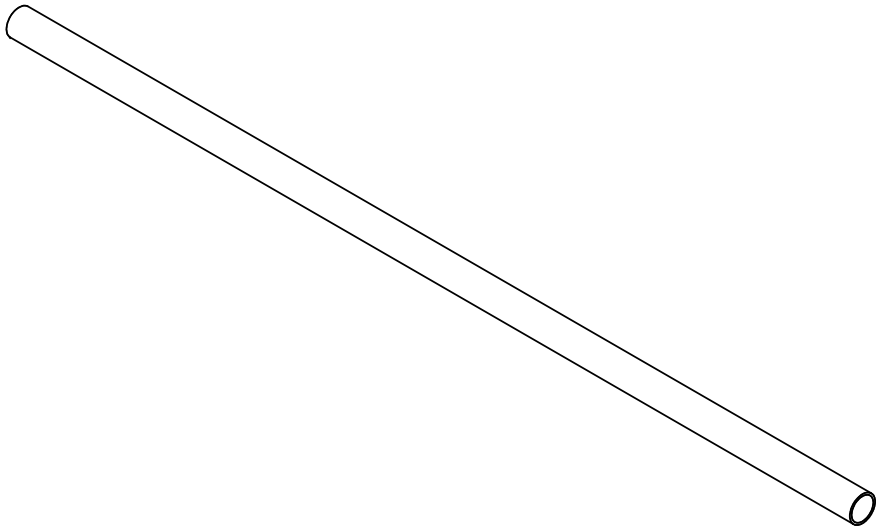
TITLE:

(3) T1671KT12 with monopole attachment ATT Heavy 10

SIZE	DWG. NO.	REV
B	T1672KT12-3SM	

SCALE: 1:25 | FINISHED WEIGHT: 2707.68 | SHEET 1 OF 1

2-1/2" Pipe Table	
Part Number	**Description**
P1090KT10	Pipe, 2-1/2" ID X 2-7/8" OD x10' L
P1090KT10.5	Pipe, 2-1/2" ID X 2-7/8" OD x10.5' L
P1090KT13	Pipe, 2-1/2" ID X 2-7/8" OD x13' L
P1090KT14	Pipe, 2-1/2" ID X 2-7/8" OD x14' L
P1090KT15	Pipe, 2-1/2" ID X 2-7/8" OD x15' L
P1090KT21	Pipe, 2-1/2" ID X 2-7/8" OD x21' L
P1090KT3	Pipe, 2-1/2" ID X 2-7/8" OD x3' L
P1090KT6	Pipe, 2-1/2" ID X 2-7/8" OD x6' L
P1090KT7	Pipe, 2-1/2" ID X 2-7/8" OD x7' L
P1090KT8	Pipe, 2-1/2" ID X 2-7/8" OD x8' L
P1090KT9	Pipe, 2-1/2" ID X 2-7/8" OD x9' L



KENWOOD TELECOM
3491 Navis Pointe Acworth, GA 30101
(888) 499-0900 (770) 974-9100 fax

NEXT ASSY | USED ON

APPLICATION

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: ± 1/32
ANGULAR: ± 2°
ONE PLACE DECIMAL: ± .06
TWO PLACE DECIMAL: ± .03
THREE PLACE DECIMAL: ± .010
INTERPRET GEOMETRIC TOLERANCING PER:
MATERIAL: Hot Dipped Galvznized Pipe A123
FINISH
DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	PQ	10/23/14
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		

COMMENTS:

KENWOOD TELECOM

TITLE:
2-1/2" Galv Pipe

SIZE	DWG. NO.	REV
B	P1090KT PIPE	

SCALE: 1:20 | SHEET 1 OF 1

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2021-ASO-12987-OE

Issued Date: 11/09/2021

Christopher Bernardo
PT Attachment Solutions, LLC
9887 4th Street North
Suite 100
St Petersburg, FL 33702-2445

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Monopole Roper Mt
Location:	Greenville, SC
Latitude:	34-50-39.86N NAD 83
Longitude:	82-18-49.30W
Heights:	1047 feet site elevation (SE)
	199 feet above ground level (AGL)
	1246 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure would have no substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on the operation of air navigation facilities. Therefore, pursuant to the authority delegated to me, it is hereby determined that the structure would not be a hazard to air navigation provided the following condition(s) is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M, Obstruction Marking and Lighting, a med-dual system-Chapters 4,8(M-Dual),&15.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part 1)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

See attachment for additional condition(s) or information.

This determination expires on 05/09/2023 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is subject to review if an interested party files a petition that is received by the FAA on or before December 09, 2021. In the event a petition for review is filed, it must contain a full statement of the basis upon which it is made and be submitted to the Manager of the Rules and Regulations Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on December 19, 2021 unless a petition is timely filed. In which case, this determination will not become final pending disposition of the petition. Interested parties will be notified of the grant of any review. For any questions regarding your petition, please contact Rules and Regulations Group via telephone – 202-267-8783.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

This aeronautical study considered and analyzed the impact on existing and proposed arrival, departure, and en route procedures for aircraft operating under both visual flight rules and instrument flight rules; the impact on all existing and planned public-use airports, military airports and aeronautical facilities; and the cumulative impact resulting from the studied structure when combined with the impact of other existing or proposed

structures. The study disclosed that the described structure would have no substantial adverse effect on air navigation.

An account of the study findings, aeronautical objections received by the FAA during the study (if any), and the basis for the FAA's decision in this matter can be found on the following page(s).

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact David Maddox, at (202) 267-4525, or david.maddox@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2021-ASO-12987-OE.

Signature Control No: 477569480-500621347 (DNH)
Mike Helvey
Manager, Obstruction Evaluation Group

Attachment(s)
Additional Information
Case Description
Frequency Data
Map(s)

cc: FCC

The proposed monopole, at a height of 199 feet (ft.) above ground level (AGL), 1,246 ft. above mean sea level (AMSL), would be located approximately 1.81 nautical miles (NM) east of the Greenville Downtown Airport (GMU), Airport Reference Point (ARP), Greenville, SC. The antenna has been identified as an obstruction under the standards of Title 14, Code of Federal Regulations (CFR), Part 77, as applied to GMU as follows:

Section 77.17 (a) (5): The surface of a takeoff and landing area of an airport or any imaginary surface established under 77.19, 77.21, or 77.23. However, no part of the takeoff or landing area itself will be considered an obstruction.
Section 77.19 (a), Horizontal Surface: A Horizontal plane 150 ft. above the established airport elevation, the perimeter of which is constructed by swinging arcs of a specified radii from the center of each end of the primary surface of each runway of each airport and connecting the adjacent arcs by lines tangent to those arcs. The proposal would exceed the Horizontal Surface by 48 ft.

The proposal was issued a Notice of Presumed Hazard on May 20, 2021. A request for public circularization was received from the proponent on September 23, 2021. Comment period closed October 30, 2021. After circularization to all known aviation interests and to non-aeronautical interests that may be affected by the proposal, two letters of objection were received as a result of circularization.

Objection: Concerns were expressed that the proposal would pose a hazard to navigable airspace around the Greenville Downtown Airport. The installation of this monopole tower may have a detrimental impact to approaches or departures to Runway 10/28.

Response: Part 77 Obstruction Standards (Section 77.17) are used to screen the many proposals submitted in order to identify those which warrant further aeronautical study in order to determine if they would have significant adverse effect on protected aeronautical operations. While the obstruction standards trigger formal aeronautical study, including circularization, they do not constitute absolute or arbitrary criteria for identification of hazards to air navigation. Accordingly, the fact that a proposed structure exceeds an obstruction standard of Part 77 does not provide a basis for a determination that the structure would constitute a hazard to air navigation. In this case, the proposal does not exceed the RWY 28Part 77 Approach Surface, nor the Traffic Pattern Airspace Approach surface. The mitigation for proposed structures which exceed the horizontal surfaces is marking and lighting (a medium-dual system). The proposal does not increase current departure or arrival procedure minimums. Any future procedures submitted to the FAA will be designed with all known obstructions, including the proposal, considered in their design.

Aeronautical study disclosed that the proposal would no effects on existing or proposed arrival, departure, or en route instrument flight rule (IFR) operations, minimum flight altitudes, minimum vectoring altitudes (MVA), aeronautical procedures, or aeronautical facilities at GMU or at any other known public use or military airport. Information on the proposals shall be forwarded for appropriate aeronautical charting.

The proposal does exceed section 77.19 (a), a Horizontal Surface; however, the proposal would have no greater effect. The proposal would not conflict with airspace required to conduct normal VFR traffic pattern and/or visual approach operations at GMU or any other known public use or military airports, which is the analytical foundation of VFR traffic pattern analysis. Additionally, the proposal should not require a VFR operation to change its regular flight course or altitude, restrict VFR operations in this area in any way, or create a dangerous situation during a critical phase of flight. At up to 199 ft. AGL, the proposal would not have substantial adverse effects on any existing or proposed arrival or departure VFR operation or procedures at GMU.

Lighting the proposal is recommended (a medium-dual system) to make the proposal more conspicuous to airmen should circumnavigation be necessary.

The cumulative impact of the proposal, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any adverse effects on existing or proposed public-use or military airports or navigational facilities, nor does the proposal affect the capacity of any known existing or planned public-use or military airport.

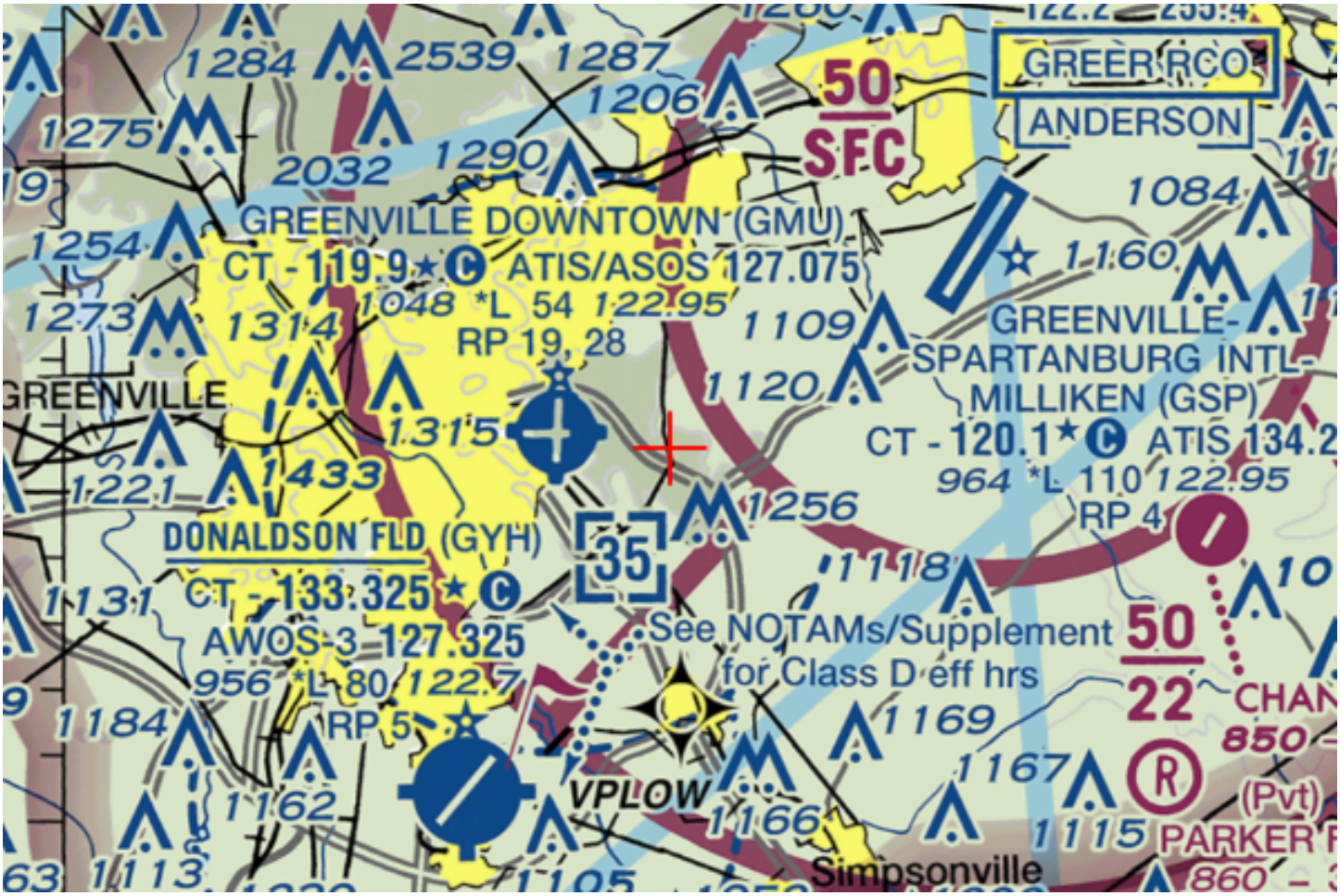
Therefore, it is determined that the proposal would not have a substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on any air navigation facility and would not be a hazard to air navigation as long as all conditions written within this determination are met.

199' monopole tower

Frequency Data for ASN 2021-ASO-12987-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
6	7	GHz	55	dBW
6	7	GHz	42	dBW
10	11.7	GHz	55	dBW
10	11.7	GHz	42	dBW
17.7	19.7	GHz	55	dBW
17.7	19.7	GHz	42	dBW
21.2	23.6	GHz	55	dBW
21.2	23.6	GHz	42	dBW
614	698	MHz	1000	W
614	698	MHz	2000	W
698	806	MHz	1000	W
806	901	MHz	500	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
929	932	MHz	3500	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1670	1675	MHz	500	W
1710	1755	MHz	500	W
1850	1910	MHz	1640	W
1850	1990	MHz	1640	W
1930	1990	MHz	1640	W
1990	2025	MHz	500	W
2110	2200	MHz	500	W
2305	2360	MHz	2000	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W

Sectional Map for ASN 2021-ASO-12987-OE



IMPACT STUDY

Impact Study - Cell Tower
1040 Keys Drive
Greenville, Greenville County,
South Carolina 29615

Type Report: Impact Study

Effective Date
February 5, 2022

February 16, 2022

Mr. Thomas H. Johnson
Attorney
Williams Mullen
301 Fayetteville Street
Suite 1700
Raleigh, NC 27601

RE: Impact Study for Proposed Telecommunications Facility located at 1040 Keys Dr., Greenville, Greenville County, SC.

Dear Mr. Johnson:

I have completed a study of the proposed tower. The scope of the assignment is to provide an analysis and conclusions addressing items within my field of expertise associated with the issuance of a special exception permit for the proposed development. A special exception permit includes four standards, of which two are addressed in this analysis. Details of these items are contained within this report.

The impact study is intended to conform to the Uniform Standards of Professional Appraisal Practice (USPAP), the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute. The impact study is not an appraisal as it does not report a value of any property; however, the study employs appraisal methodology to reach our conclusions of the impact of the proposed development.

The proposed development is a communication tower to be located on a property owned by Duke Power Company. The site is currently improved with a power substation. The subject is located within the sphere of influence of the interchange of Interstate 385 and Roper Mountain Road. The surrounding land uses and existing improvements on the site are contributing factors in the development of a conclusion regarding the potential impact of the tower.

The conclusions of this study are supported by the data and reasoning set forth in the attached narrative. Your attention is invited to the Assumptions and Limiting Conditions section of this report. The analysts certify that we have no present or contemplated future interest in the proposed development, and that our fee for this assignment is in no way contingent upon the conclusions of this study.

EXTRAORDINARY ASSUMPTIONS AND HYPOTHETICAL CONDITIONS:

Real Property Appraisers and Consultants
1100 Sundance Drive, Concord, North Carolina 28027
Telephone: 704-605-0595

It is an extraordinary assumption of this report that the proposed development will be constructed as detailed in the report. Further, it is an assumption of the study that the maintenance will occur through a non-exclusive right-of-way that we assume is a legal access.

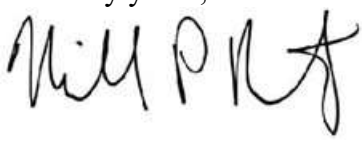
It is an extraordinary assumption of this report that the improvements as described within this report are compliant with the appropriate ordinance regarding items including but not necessarily limited to setbacks, landscaping and access that are outside our field of expertise. These items will be addressed as part of the application by others with expertise within the respective fields.

The content and conclusions of this report are intended for our client and for the specified intended uses only. They are also subject to the assumptions and limiting conditions as well as the specific extraordinary assumptions set forth in this report.

It is our opinion that the proposed development will not reduce property values of surrounding lands.

Thank you for the opportunity to be of service. If you have any questions or comments, please contact our office.

Sincerely yours,



MICHAEL P. BERKOWITZ
MPB REAL ESTATE, LLC

TABLE OF CONTENTS

SCOPE OF THE ASSIGNMENT

In accordance with our agreement with the client, this impact study is specific to the needs of our client as part of an application for a special exception permit to be considered by Greenville City Officials. Our study and the reporting of our study is in agreement with our client as follows:

The proposed development requires a Special Exception Permit. The report is intended to address items relevant to the issuance of the permit. The following 'Standards" were extracted from the Greenville Ordinance Chapter 19-2.3.5.

(1) *Special exception.* For a use identified as a special exception in subsection 19-4.1.2, table of uses:

(a) *Consistent with the comprehensive plan.* The proposed special exception is consistent with the comprehensive plan.

(b) *Complies with use specific standards.* The proposed special exception complies with all standards in section 19-4.3, use specific standards.

(c) *Compatibility.* The proposed special exception is appropriate for its location and compatible with the character of surrounding lands and the uses permitted in the zoning districts of surrounding lands, and will not reduce property values of surrounding lands.

(d) *Design does not have substantial adverse impact.* The design of the proposed special exception minimizes adverse effects, including visual impacts of the proposed use on adjacent lands; furthermore, the proposed special exception does not impose significant adverse impact on surrounding lands regarding service delivery, parking and loading, odors, noise, glare, vibration, and does not create a nuisance.

The scope of the assignment includes research of existing towers in Greenville. The neighborhoods and their surrounding developments are researched to determine whether the proposed development, referred to as the "The Redcliffe Relo Site", is consistent with the location of other towers in the area and their impact, if any, on neighborhood development patterns and property values.

The impact study provides an analysis of the surrounding properties. The analysis includes existing improvements, zoning designations and likely development patterns. The existing uses as of the effective date of this report in concert with the market data provided are contributing factors to the conclusions of this study.

PREMISES OF THE STUDY

Identification of Subject

The Redcliffe Relo Site

1040 Keyes Drive
Greenville, Greenville County, NC 29615

Greenville County Tax Parcel: 0547020100102

Client, Purpose, and Intended Use and Intended Users

Mr. Thomas H. Johnson
Attorney
Williams Mullen
301 Fayetteville Street
Suite 1700
Raleigh, NC 27601

The client and intended user are Mr. Tom Johnson. The intended use is as an aid to assist City of Greenville officials in rendering a decision regarding the issuance of a special exception permit for the proposed development. The study is not intended for any other use or users.

Michael P. Berkowitz

MPB Real Estate, LLC
1100 Sundance Drive
Concord, NC 28027

Property Inspection

Michael Berkowitz inspected the property and neighborhood surrounding the proposed development. Details of surrounding land uses are provided throughout the report. I also performed off-site visual inspections of several towers located in the greater Greenville area. I consider the observations in the context of the market data. They are a contributing factor to the conclusions of this study.

Extraordinary Assumptions of Report

It is an extraordinary assumption of this report that the improvements as described within this report are compliant with the appropriate ordinance regarding items including but not necessarily limited to setbacks, landscaping, access, and other items outside our field of expertise for this assignment.

These items will be addressed as part of the application by others with expertise within the respective fields.

Should the extraordinary assumptions not exist, we reserve the right to amend this study.

Effective Date of Study February 5, 2022

Date of Report February 16, 2022

Type Report Impact Study Report

Study Development and Reporting Process

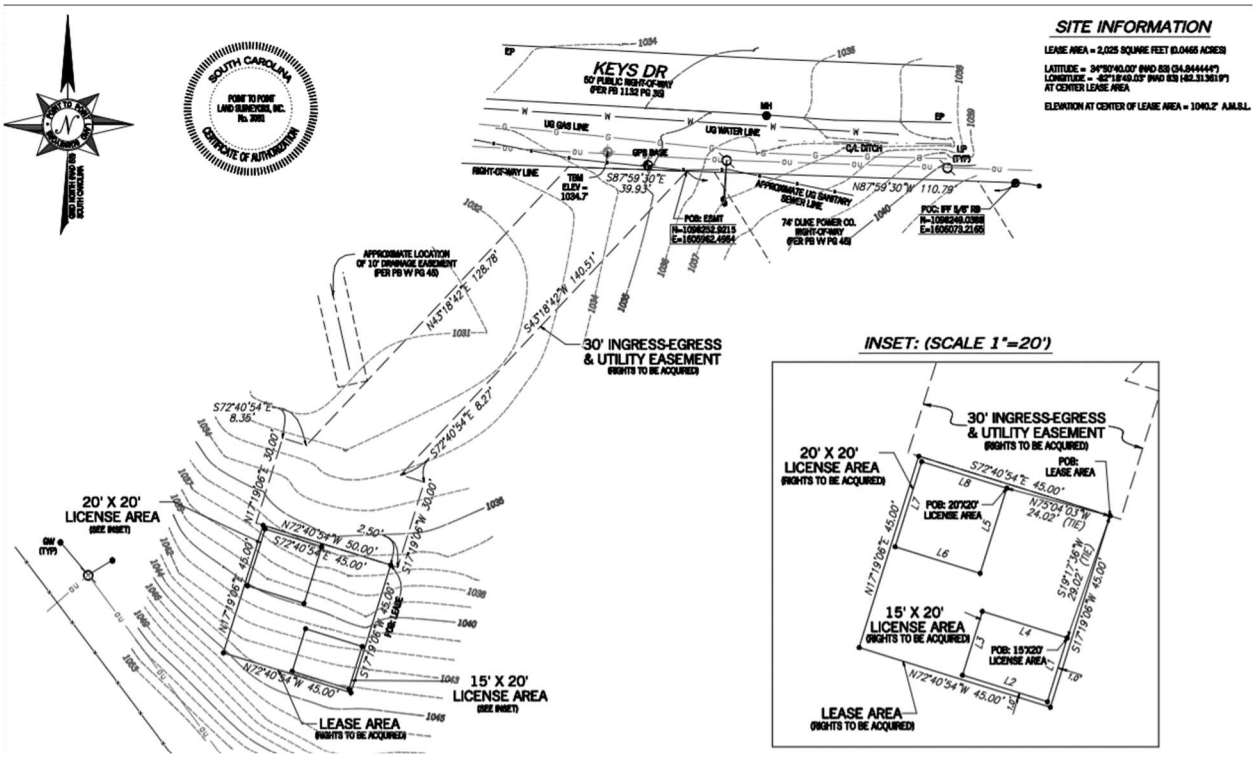
In preparing this study, the analyst:

- Analyzes physical affects, if any, of the proposed construction on properties in the immediate area as well as the neighborhood;
- Reviews plans for the proposed development to determine whether it is in compliance with the City of Greenville Ordinance with respect to items within my field of expertise;
- Reviews site plan provided by our client with respect to the physical characteristics of the proposed development;
- Research market data around existing cell towers in the greater Greenville area to determine whether the proposed development is consistent with other developments in the area.

PROPOSED FACILITY

Tower

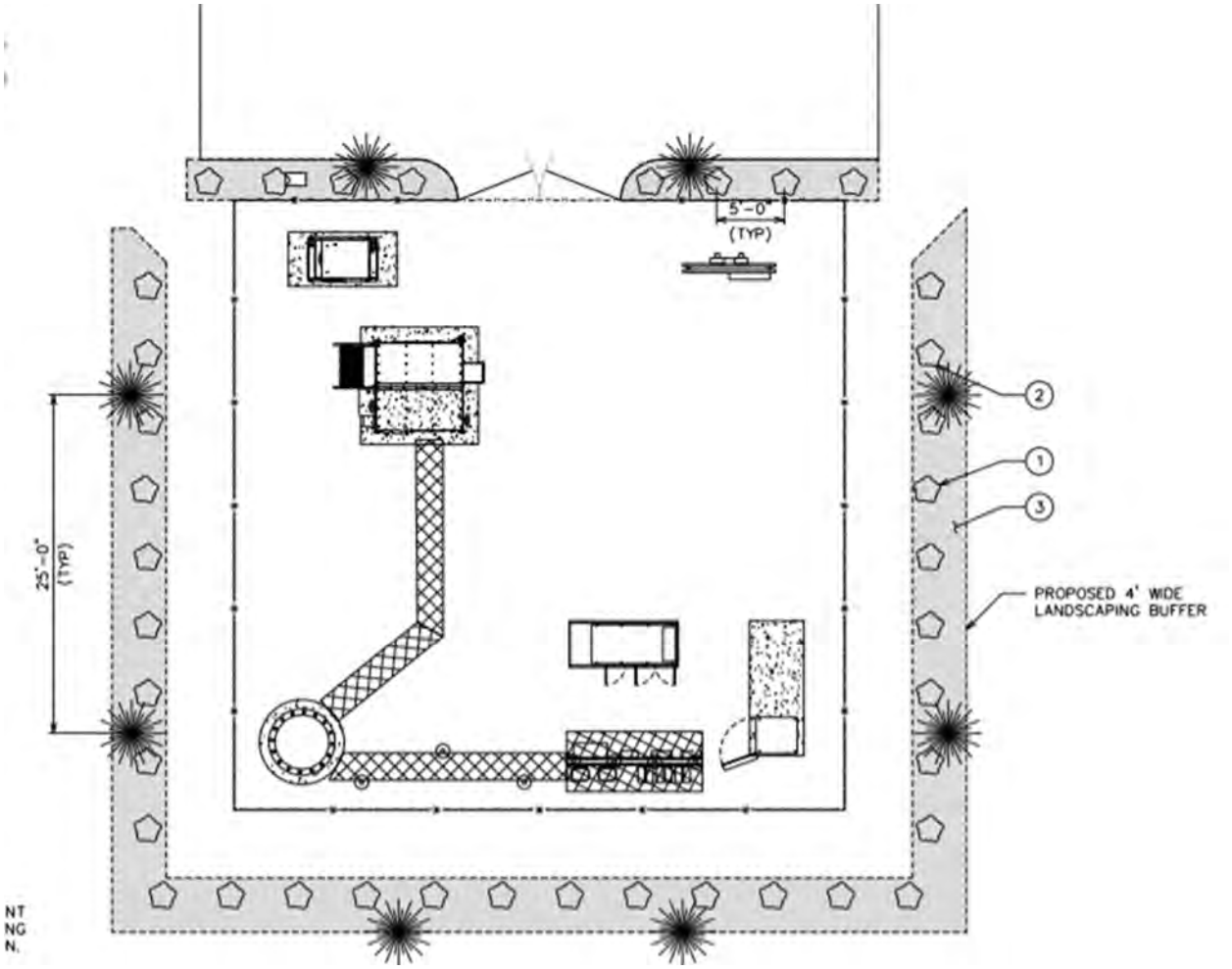
Based on information provided to the analyst, the proposed tower will consist of a 199-foot "monopole" communications tower. The survey appears to show that access to the tower will be provided by a proposed driveway for the property. The following site plan shows the proposed site.



SITE PLAN

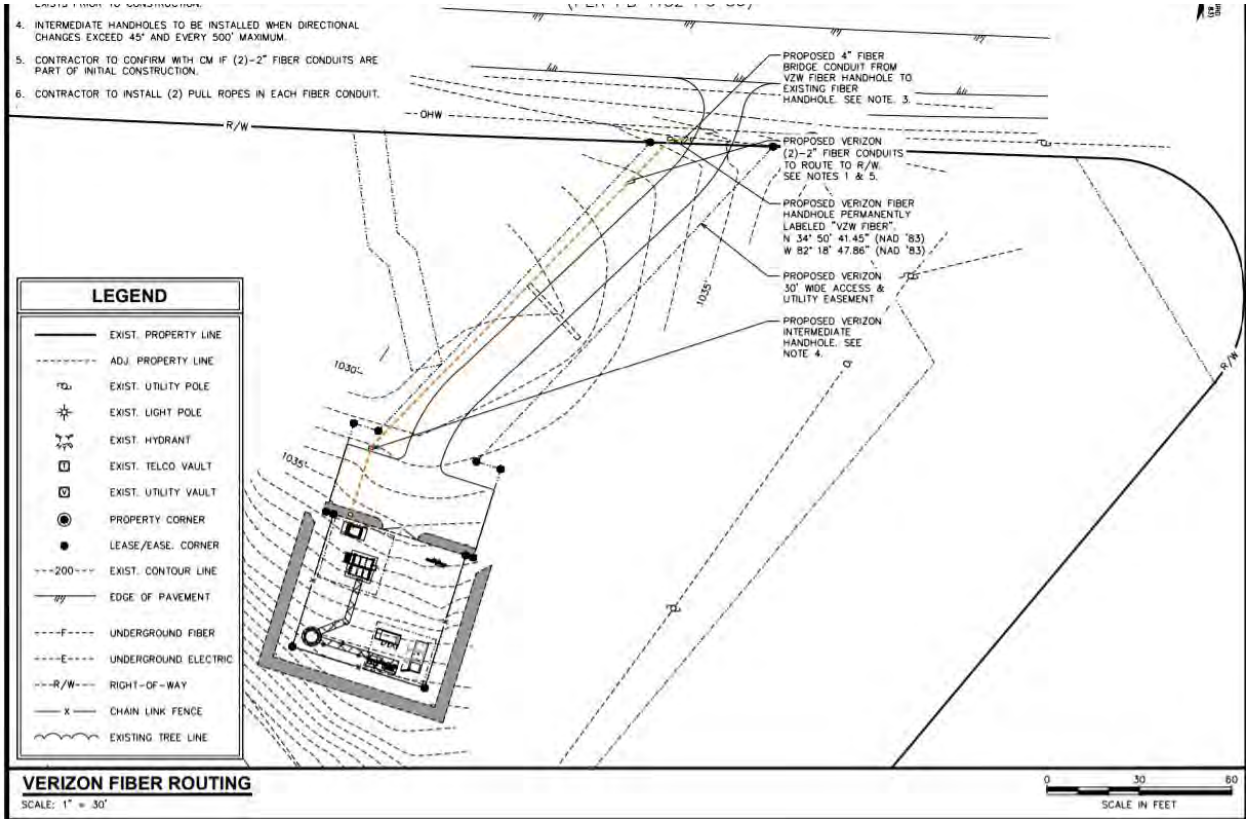
Site Improvements

The site improvements include an eight-foot chain link fence with three strands of barbed wire. We understand that the barbed wire may be required to be below the top of the fence. The site improvements will include a four-foot-wide landscaping buffer. The proposed tower will be located amongst the numerous electrical wires emanating from the substation.



Access

According to the site plan, the access to the site will be via a 30-foot-wide utility/access easement extending from Keys Drive, which runs along the northern boundary of the subject. The following exhibit was extracted from the site plan. Keyes Drive is a secondary road within the commercial nodal growth pattern of the interchange with Interstate 385.


4. INTERMEDIATE HANDHOLES TO BE INSTALLED WHEN DIRECTIONAL CHANGES EXCEED 45° AND EVERY 500' MAXIMUM.
5. CONTRACTOR TO CONFIRM WITH CM IF (2)-2" FIBER CONDUITS ARE PART OF INITIAL CONSTRUCTION.
6. CONTRACTOR TO INSTALL (2) PULL ROPES IN EACH FIBER CONDUIT.
R/W
OHW
PROPOSED 4" FIBER BRIDGE CONDUIT FROM VZW FIBER HANDHOLE TO EXISTING FIBER HANDHOLE. SEE NOTE. 3.
PROPOSED VERIZON (2)-2" FIBER CONDUITS TO ROUTE TO R/W. SEE NOTES 1 & 5.
PROPOSED VERIZON FIBER HANDHOLE PERMANENTLY LABELED "VZW FIBER". N 34° 50' 41.45" (NAD '83) W 82° 18' 47.86" (NAD '83)
PROPOSED VERIZON 30' WIDE ACCESS & UTILITY EASEMENT
PROPOSED VERIZON INTERMEDIATE HANDHOLE. SEE NOTE 4.
1030'
1035'
LEGEND
EXIST. PROPERTY LINE
ADJ. PROPERTY LINE
EXIST. UTILITY POLE
EXIST. LIGHT POLE
EXIST. HYDRANT
EXIST. TELCO VAULT
EXIST. UTILITY VAULT
PROPERTY CORNER
LEASE/EASE. CORNER
200 EXIST. CONTOUR LINE
EDGE OF PAVEMENT
UNDERGROUND FIBER
UNDERGROUND ELECTRIC
RIGHT-OF-WAY
CHAIN LINK FENCE
EXISTING TREE LINE
VERIZON FIBER ROUTING
SCALE: 1" = 30'
0 30 60
SCALE IN FEET

Location

The tower will be in the northeastern portion of the site. The siting of the tower will be amongst the numerous existing power lines on the site. The site is a secondary location near the interchange of Roper Mountain Road and Interstate 385. The location is a factor in the analysis.

The subject has a zoning designation of C-3, a commercial designation. The commercial designation permits a variety of potential developments consistent with the development patterns surrounding the site. As we will detail later in the report, the land uses of the surrounding properties are a factor in the analysis.

SURROUNDING LAND USES

The development patterns and land uses of the surrounding properties are consistent with nodal development patterns at interchanges with interstates. The types of development are consistent with areas of population growth being experienced in Greenville. The land uses within the nodal growth area includes office, retail, multifamily and some industrial developments. The mixture of uses is typical for areas with highway influence and provide utility linkage for the residents.

As we will discuss in the following section, the scope of the assignment is to determine whether the proposed development is in accordance with the Greenville Ordinance regarding the issuance of a special exception permit and the development of wireless telecommunications facilities. The items within our field of expertise are detailed in the following section.

GREENVILLE ORDINANCE

As part of the assignment, I reviewed Chapter 19 Section 3.5 (G) of the Greenville ordinance regarding the development of wireless communication facilities. I also reviewed the 'Standards" from the Greenville Ordinance Chapter 19-2.3.5.

(1) *Special exception.* For a use identified as a special exception in subsection 19-4.1.2, table of uses:

(a) *Consistent with the comprehensive plan.* The proposed special exception is consistent with the comprehensive plan.

(b) *Complies with use specific standards.* The proposed special exception complies with all standards in section 19-4.3, use specific standards.

(c) *Compatibility.* The proposed special exception is appropriate for its location and compatible with the character of surrounding lands and the uses permitted in the zoning districts of surrounding lands, and will not reduce property values of surrounding lands.

(d) *Design does not have substantial adverse impact.* The design of the proposed special exception minimizes adverse effects, including visual impacts of the proposed use on adjacent lands; furthermore, the proposed special exception does not impose significant adverse impact on surrounding lands regarding service delivery, parking and loading, odors, noise, glare, vibration, and does not create a nuisance.

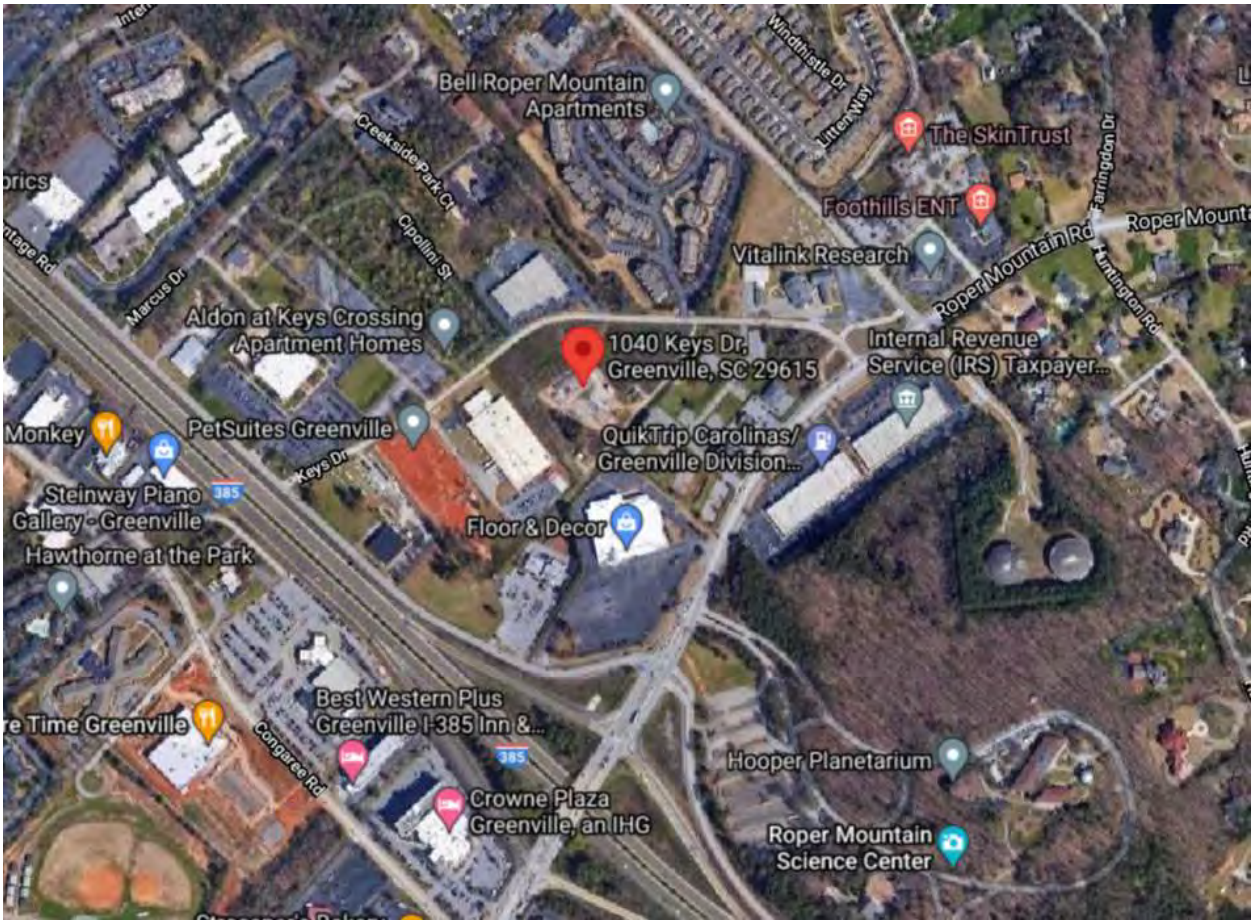
Item a – It is our understanding, this will be performed and reviewed by local officials in concert with our client.

Item b – It is our understanding, this will be performed and reviewed by local officials in concert with our client.

Item c – The development, if completed as proposed, will not reduce the value of surrounding lands. This is the focal point of the remainder of the study.

Item d – The development, if completed as proposed, from an appraiser's perspective does not have a substantial adverse impact on adjacent lands. This item identifies items that could pose an influence on property values and is addressed in the following analysis.

Based on our review of the ordinance, the remainder of the study focuses on surrounding lands and potential adverse impacts on value. The land uses for the area include a variety of commercial, industrial, and multifamily uses. The following analysis is based on the potential visual impact of the proposed development on the surrounding properties. The following aerial provides and overview of the surrounding area.



As shown on the map and confirmed during our tour of the area, the surrounding land uses include a variety of uses. The interchange with the interstate is the controlling factor in the development patterns. The proposed development is in the northern quadrant of the interchange. The area bound by Keys Drive includes commercial, office and industrial uses. Land uses on the north side of Keys Drive include multifamily developments as well as additional commercial and industrial developments.

We will discuss property values later in the report. We acknowledge that the proposed 199-foot tower will be taller than any other structure in the area. The visual impact is comparable to the existing electrical infrastructure on the site albeit taller. The areas on the southeastern quadrant, which is the location of the planetarium, has existing trees that will likely obscure the tower from site. The existing electrical

infrastructure, land uses and other external influences on the area are factors in the analysis.

Summary

The items within our field of expertise focus on the aesthetic impact of the proposed development. This is based on the existing developments as detailed earlier in the study. The existing infrastructure on the subject site and the nodal growth patterns around the interchange are factors in the analysis.

MARKET RESEARCH

A potential issue associated with the impact of the proposed development is on property values in the immediate vicinity and the neighborhood. We researched towers in Greenville and the surrounding area and identify the development patterns around these towers. After analyzing the market data, we compare this information to the proposed site and the physical characteristics and development patterns surrounding the proposed development.

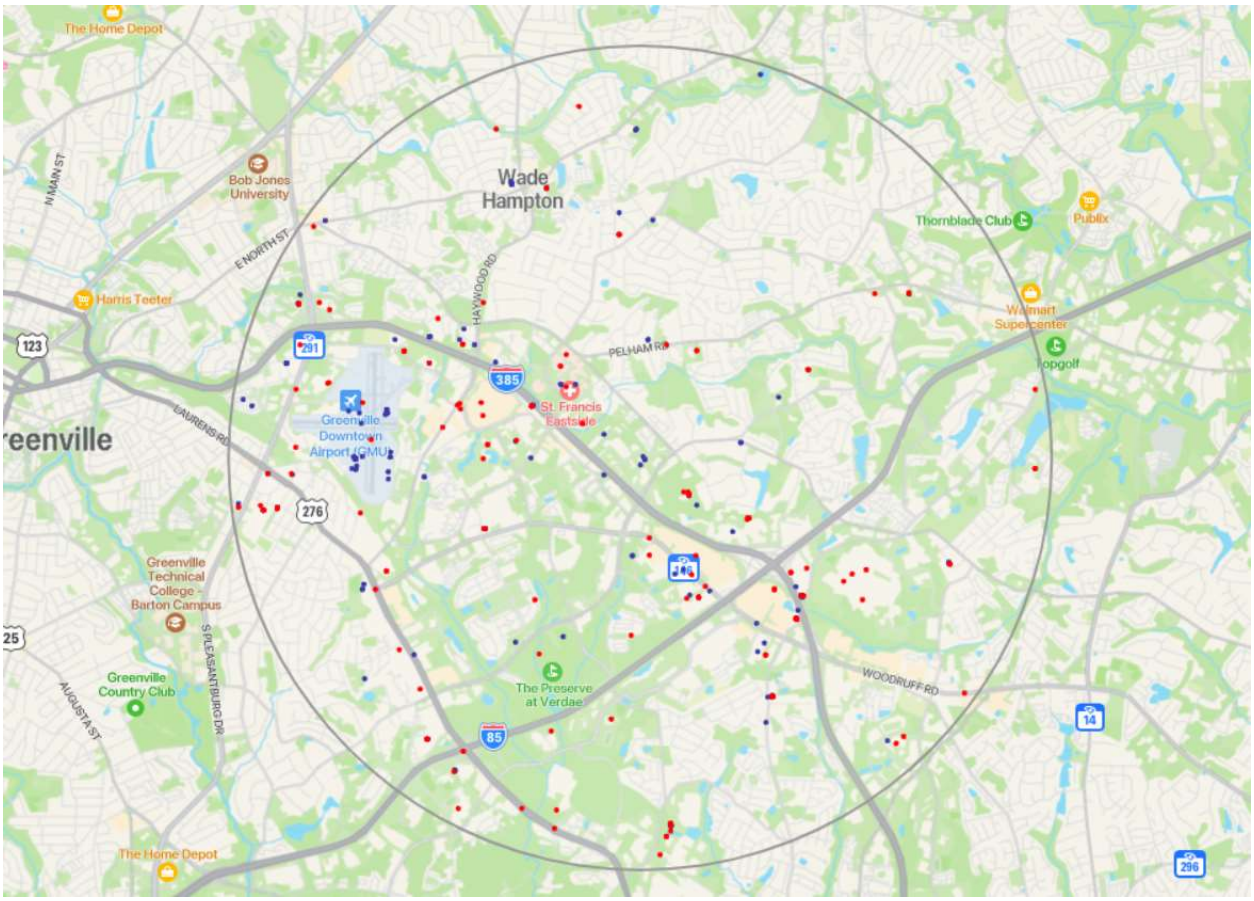
Greenville Area Towers

During our research, we observed several towers in and around Greenville. Most of the towers found were in established commercial or industrial areas similar to the subject. Towers are classified as comparable for a variety of reasons including but not necessarily limited to:

- *Location* – The proposed location is a nodal growth pattern at the interchange with an interstate
- *Surrounding Developments* – The surrounding developments include commercial, office, industrial and multifamily developments.
- *Construction Type/Height* – The proposed tower is a monopole tower with a proposed height of 199 feet.

For the research of towers, we rely on information from antennasearch.com, which we consider a reliable source of information. The website identified 154 towers within a three-mile radius of the proposed tower. We excluded those towers

less than 100 feet which includes some of the electrical infrastructure on the subject site. We also excluded towers near the airport as this is location is inconsistent with the proposed location. We focused on towers near interstates in the Greenville area. The following map provides the results from the search for towers in the area.



The research of towers near interstates showed that development of communication towers along highways is common. Towers along highways are prevalent throughout most areas as traffic volumes require service along these corridors. The prevalence of the development of towers along interstates is a factor in the analysis.

We researched market activity for all the towers with highway influence. The intent of the analysis was to isolate the impact of the tower, if any, on property values. The quantitative analysis looks for comparable properties with the primary

variance between the properties being the presence of a communications tower. Despite a diligent search of market data for over 30 towers with highway influence, the market data provided limited quantity and quality of data to perform a paired sales analysis. In other words, the sales had several factors influencing value making any attempt to isolate the impact of the tower not credible.

I have performed numerous studies in North and South Carolina on the potential impact of cell towers on properties with similar influence from an interstate and land uses as the proposed tower. The results of these analyses were inconclusive because of other factors influencing prices paid. Therefore, the analysis focuses on a qualitative analysis detailed in the following section.

Qualitative Analysis

The question posed for this study is "would the development of the wireless facility warrant a downward adjustment to surrounding properties?" The previous analysis provides no empirical evidence to support a quantitative adjustment. The following analysis is intended to determine whether a qualitative adjustment is warranted.

Subject Neighborhood

When considering qualitative adjustments in an appraisal, the appraiser must consider all factors that could contribute to an adjustment. The aesthetics and location of the proposed development as well as the existing developments are a factor in developing our opinion. The factors considered in developing our opinion include but are not necessarily limited to:

- The proposed development is located on a site with significant above ground infrastructure including power lines and structures associated with the power substation.

- The location has numerous other external factors influencing the development patterns for the area including proximity of the interstate.

- The development of cell towers near interstates is common in Greenville and other areas throughout the Carolinas.

- The land uses in the area include commercial, office, industrial and multifamily developments.

All these factors would contribute to the aesthetic appeal and a hypothetical valuation of properties in the neighborhood. The multitude of factors indicates that multicollinearity for aesthetics exists. Multicollinearity arises when multiple items correlate with each other. The multiple factors can cause a distortion of the impact of any of the factors individually without consideration for all the factors that contribute to the common issue.

I have recently performed an appraisal of a mini-storage facility in Greenville with heavy influence from the interstate. Adjacent to this property was a large lattice cell tower with a height significantly taller than the proposed tower. Based on the analysis of this property and surrounding developments, the cell tower did not impact any of the development patterns in the area. The land uses included a similar mix as the proposed location. In fact, national retailers and developers were actively pursuing land for development of retail and office. The indication is that even a larger tower did not impede the use of properties or development of areas with strong highway influence.

Over the past 20 years, I have appraised several industrial properties. Typically, industrial uses have strict regulations regarding buffers and other developmental regulations to minimize their impact on surrounding properties. I have observed numerous industrial properties that have towers on-

site for their use to increase communications especially in areas of manufacturing and distribution.

The third type of land use in the area is multifamily. Current multifamily developments have shown a propensity for cell towers on or near these sites. The population densities have spurred demand for capacity. Some complexes are incorporating wireless communication services in their development. Given the increase in usage of wireless services, we consider this trend likely to continue.

The following provides a summary of our conclusions regarding the items for a special exception permit. We reiterate these items for reference purposes.

(1) *Special exception.* For a use identified as a special exception in subsection 19-4.1.2, table of uses:

(a) *Consistent with the comprehensive plan.* The proposed special exception is consistent with the comprehensive plan.

(b) *Complies with use specific standards.* The proposed special exception complies with all standards in section 19-4.3, use specific standards.

(c) *Compatibility.* The proposed special exception is appropriate for its location and compatible with the character of surrounding lands and the uses permitted in the zoning districts of surrounding lands, and will not reduce property values of surrounding lands.

(d) *Design does not have substantial adverse impact.* The design of the proposed special exception minimizes adverse effects, including visual impacts of the proposed use on adjacent lands; furthermore, the proposed special exception does not impose significant adverse impact on surrounding lands regarding service delivery, parking and loading, odors, noise, glare, vibration, and does not create a nuisance.

Item C

The proposed tower is concluded to be appropriate for its location and compatible with the character of surrounding land uses. The land uses are consistent with other nodal growth patterns with heavy influence from a highway. The market provides no empirical evidence that a tower will reduce property values of surrounding land. Further, the location on a site with significant infrastructure indicates that the proposed tower represents a small incremental increase in the visual impact for the area.

Item D

We recognize that obscuring a 199-foot tower is not practical. Again, the siting of the proposed tower on a site improved with a power substation minimizes to the greatest extent possible the visual impact on the neighborhood. The pother external factors in the neighborhood including traffic, noise and other items identified in the ordinance are nominal.

Therefore, it is our opinion that the proposed development in accordance with the proposed conditions will not reduce property values in the surrounding area. The proposed development has siting to minimize to the extent possible the visual impact of the proposed tower. It is my opinion that the proposed development will not substantially detract from the aesthetics or character of the neighborhood because of its location and existing above ground infrastructure and location near the interstate.

Michael P. Berkowitz

ADDENDA

Certifications

CERTIFICATION OF THE ANALYST

I, Michael P. Berkowitz, certify that, to the best of my knowledge and belief,

1. The statements of fact contained in this report are true and correct.
2. The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
3. I have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved.
4. I have performed no services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
5. I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
6. My engagement in this assignment was not contingent upon developing or reporting predetermined results.
7. My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this study.
8. The reported analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the *Uniform Standards of Professional Appraisal Practice*.
9. The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
10. I have made a personal inspection of the property that is the subject of this report.
11. No one provided significant real property appraisal assistance to the person(s) signing this certification other than those individuals having signed the attached report.

Michael P. Berkowitz
(NC State Certified General Real Estate Appraiser #A6169)
(SC State Certified General Real Estate Appraiser #CG6277)

February 16, 2022
Date

(Rev: 06/18/12)

ASSUMPTIONS AND LIMITING CONDITIONS

ASSUMPTIONS AND LIMITING CONDITIONS

Limit of Liability
The liability of MPB REAL ESTATE, LLC and employees is limited to the client only and to the fee actually received by our firm. Further, there is no accountability, obligation, or liability to any third party. If this report is placed in the hands of anyone other than client, the client shall make such party aware of all limiting conditions and assumptions of the assignment and related discussions. Further, client will forever indemnify and hold MPB REAL ESTATE, LLC, its officers, and employees harmless from any claims by third parties related in any way to the appraisal or study which is the subject of the report. Third parties shall include limited partners of client if client is a partnership and stockholders of client if client is a corporation, and all lenders, tenants, past owners, successors, assigns, transferees, and spouses of client. MPB REAL ESTATE, LLC will not be responsible for any costs incurred to discover or correct any deficiencies of any type present in the property, physically, financially, and/or legally.

Copies, Distribution, Use of Report
Possession of this report or any copy of this report does not carry with it the right of publication, nor may it be used for other than its intended use; the physical report remains the property of MPB REAL ESTATE, LLC for the use of the client, the fee being for the analytical services only.

The bylaws and regulations of the Appraisal Institute require each member and candidate to control the use and distribution of each report signed by such member or candidate; except, however, the client may distribute copies of this report in its entirety to such third parties as he may select; however, selected portions of this report shall not be given to third parties without the prior written consent of the signatories of this report. Neither all nor any part of this report shall be disseminated to the general public by the use of advertising media, public relations, news, sales or other media for public communication without the prior written consent of MPB REAL ESTATE, LLC.

Confidentiality
This report is to be used only in its entirety and no part is to be used without the whole report. All conclusions and opinions concerning the analysis as set forth in the report were prepared by MPB REAL ESTATE, LLC whose signatures appear on the report. No change of any item in the report shall be made by anyone other than MPB REAL ESTATE, LLC. MPB REAL ESTATE, LLC shall have no responsibility if any such unauthorized change is made.

MPB REAL ESTATE, LLC may not divulge the material contents of the report, analytical findings, or conclusions, or give a copy of the report to anyone other than the client or his designee as specified in writing except as may be required by the Appraisal Institute as they may request in confidence for ethics enforcement, or by a court of law or body with the power of subpoena.

Trade Secrets
This report was obtained from MPB REAL ESTATE, LLC and consists of “trade secrets and commercial or financial information” which is privileged and confidential and exempted from disclosure under 5 U.S.C. 552 (b) (4) of the Uniform Commercial Code. MPB REAL ESTATE, LLC shall be notified of any request to reproduce this report in whole or in part.

Information Used
No responsibility is assumed for accuracy of information furnished by or work of others, the client, his designee, or public records. We are not liable for such information or the work of subcontractors. The comparable data relied upon in this report has been confirmed with one or more parties familiar with the transaction or from affidavit or other sources thought reasonable; all are considered appropriate for inclusion to the best of our factual judgment and knowledge. An impractical and uneconomic expenditure of time would be required in attempting to furnish unimpeachable verification in all instances, particularly as to engineering and market-related information. It is suggested that the client consider independent verification as a prerequisite to any transaction involving sale, lease, or other significant commitment of funds for the subject property.

Financial Information
Our value opinion(s) have been based on unaudited financials, and other data provided to us by management and/or owners. If these reports are found to be inaccurate, we reserve the right to revise our value opinion(s). It is noted we are depending on these accounting statements as being accurate and our interpretation of these statements as being accurate as well. If these assumptions later prove to be false, we reserve the right to amend our opinions of value.

Testimony, Consultation, Completion of Contract for Report Services
The contract for report, consultation, or analytical service is fulfilled and the total fee payable upon completion of the report, unless otherwise specified. MPB REAL ESTATE, LLC or those assisting in preparation of the report will not be asked or required to give testimony in court or hearing because of having made the report, in full or in part, nor engage in post report consultation with client or third parties except under separate and special arrangement and at an additional fee. If testimony or deposition is required because of any subpoena, the client shall be responsible for any additional time, fees, and charges, regardless of issuing party.

Exhibits
The illustrations and maps in this report are included to assist the reader in visualizing the property and are not necessarily to scale. Various photographs, if any, are included for the same purpose as of the date of the photographs. Site plans are not surveys unless so designated.

Legal, Engineering, Financial, Structural or Mechanical Nature, Hidden Components, Soil
No responsibility is assumed for matters legal in character or nature, nor matters of survey, nor of any architectural, structural, mechanical, or engineering nature. No opinion is rendered as to the title, which is presumed to be good and marketable. The property is appraised as if free and clear, unless otherwise stated in particular parts of the report. The legal description is assumed to be correct as used in this report as furnished by the client, his designee, or as derived by MPB REAL ESTATE, LLC.

MPB REAL ESTATE, LLC has inspected as far as possible, by observation, the land, and the improvements; however, it was not possible to personally observe conditions beneath the soil, or hidden structural, mechanical, or other components, and MPB REAL ESTATE, LLC shall not be responsible for defects in the property which may be related.

The report is based on there being no hidden, unapparent, or apparent conditions of the property site, subsoil or structures or toxic materials which would render it more or less valuable. No

responsibility is assumed for any such conditions or for any expertise or engineering to discover them. All mechanical components are assumed to be in operable condition and status standard for properties of the subject type. Conditions of heating, cooling, ventilation, electrical, and plumbing equipment are considered to be commensurate with the condition of the balance of the improvements unless otherwise stated. We are not experts in this area, and it is recommended, if appropriate, the client obtain an inspection of this equipment by a qualified professional.

If MPB REAL ESTATE, LLC has not been supplied with a termite inspection, survey or occupancy permit, no responsibility or representation is assumed or made for any costs associated with obtaining same or for any deficiencies discovered before or after they are obtained. No representation or warranties are made concerning obtaining the above-mentioned items.

MPB REAL ESTATE, LLC assumes no responsibility for any costs or consequences arising due to the need, or the lack of need, for flood hazard insurance. An agent for The Federal Flood Insurance Program should be contacted to determine the actual need for Flood Hazard Insurance.

Legality of Use
The report is based on the premise that there is full compliance with all applicable federal, state, and local environmental regulations and laws unless otherwise stated in the report; further, that all applicable zoning, building and use regulations, and restrictions of all types have been complied with unless otherwise stated in the report. Further, it is assumed that all required licenses, consents, permits, or other legislative or administrative authority, local, state, federal and/or private entity or organization have been or may be obtained or renewed for any use considered in the value estimate.

Component Values
The distribution of the total valuation in this report between land and improvements applies only under the existing program of utilization. The separate valuations for land and building must not be used in conjunction with any other report and are invalid if so used.

Auxiliary and Related Studies
No environmental or impact studies, special market study or analysis, highest and best use analysis, study, or feasibility study has been required or made unless otherwise specified in an agreement for services or in the report.

Dollar Values, Purchasing Power
The market value estimated, and the costs used are as of the date of the estimate of value, unless otherwise indicated. All dollar amounts are based on the purchasing power and price of the dollar as of the date of the value estimate.

Inclusions
Furnishings and equipment or personal property or business operations, except as specifically indicated and typically considered as a part of real estate, have been disregarded with only the real estate being considered in the value estimate, unless otherwise stated. In some property types, business and real estate interests and values are combined.

Proposed Improvements, Special Value
Improvements proposed, if any, onsite or offsite, as well as any repairs required, are considered for purposes of this report to be completed in a timely, good, and workmanlike manner, according to information submitted and/or considered by MPB REAL ESTATE, LLC. In cases of proposed construction, the report is subject to change upon inspection of property after construction is completed.

Value Change, Dynamic Market, Influences, Alteration of Estimate
The estimated value, which is defined in the report, is subject to change with market changes over time. Value is highly related to exposure, time, promotional effort, terms, motivation, and conditions surrounding the offering. The value estimate considers the productivity and relative attractiveness of the property physically and economically in the marketplace.

In cases of reports involving the capitalization of income benefits, the estimate of market value or investment value or value in use is a reflection of such benefits and MPB REAL ESTATE, LLC' interpretation of income and yields and other factors derived from general and specific client and market information. Such estimates are as of the date of the estimate of value; thus, they are subject to change as the market and value is naturally dynamic.

The "estimate of market value" in the report is not based in whole or in part upon the race, color, or national origin of the present owners or occupants of the properties in the vicinity of the property appraised.

Report and Value Estimate
Report and value estimate are subject to change if physical or legal entity or financing differ from that envisioned in this report.

Management of the Property
It is assumed that the property which is the subject of this report will be under prudent and competent ownership and management**.**

Hazardous Materials
Unless otherwise stated in this report, the existence of hazardous substances, including without limitation, asbestos, polychlorinated biphenyls, petroleum leakage, or agricultural chemicals, which may or may not be present on the property, or other environmental conditions, were not called to the attention of nor did MPB REAL ESTATE, LLC become aware of such during their inspection. MPB REAL ESTATE, LLC had no knowledge of the existence of such materials on or in the property unless otherwise stated. MPB REAL ESTATE, LLC, however, is not qualified to test such substances or conditions. If the presence of such substances such as asbestos, urea formaldehyde foam insulation, or other hazardous substances or environmental conditions, may affect the value of the property, the value estimate is predicated on the assumption that there is no such condition on or in the property or in the proximity that it would cause a loss in value. No responsibility is assumed for any such conditions, nor for any expertise or engineering knowledge required to discover them.

Soil and Subsoil Conditions
Unless otherwise stated in this report, MPB REAL ESTATE, LLC does not warrant the soil or subsoil conditions for toxic or hazardous waste materials. Where any suspected materials might

be present, we have indicated in the report; however, MPB REAL ESTATE, LLC are not experts in this field and recommend appropriate engineering studies to monitor the presence or absence of these materials.

Americans with Disabilities Act (ADA)

"MPB REAL ESTATE, LLC has not made a specific compliance survey and analysis of this property to determine whether or not it is in conformity with the various detailed requirements of the Americans with Disabilities Act (ADA), which became effective January 26, 1992. It is possible that a compliance survey of the property together with a detailed analysis of the requirements of the ADA could reveal that the property is not in compliance with one or more of the requirements of the Act. If so, this fact could have a negative effect upon the value of the property. Since MPB REAL ESTATE, LLC has no direct evidence relating to this issue, we did not consider possible non-compliance with the requirements of ADA in estimating the value of the property."

Qualifications of the Analyst

QUALIFICATIONS OF THE ANALYST

Michael P. Berkowitz
MPB Real Estate, LLC, Inc.
1100 Sundance Drive
Concord, North Carolina 28027
(704) 605-0595

EDUCATION AND CREDENTIALS

- **Duke University**
  Major: Economics 1985-1989

- **Central Piedmont Community College**

R-1 -	Introduction to Real Estate Appraisal, 2002
R-2 -	Valuation Principles and Procedures, 2002
R-3 -	Applied Residential Property Valuation, 2002
G-1 -	Introduction to Income Property Appraisal, 2003

- **Bob Ipock and Associates**

G-2 -	Advanced Income Capitalization Procedures, 2003
G-3 -	Applied Property Income Valuation 2004

- **Appraisal Institute**

520	Highest and Best Use and Market Analysis, 2004
Seminar	Rates, Multipliers and Ratios 2005
530	Advanced Sales Comparison and Cost Approaches 2006
Seminar	Apartment Appraisal, Concepts & Applications 2009
Seminar	Appraising Distresses Commercial Real Estate 2009
Seminar	Appraising Convenience Stores 2011
Seminar	Analyzing Operating Expenses 2011

AFFILIATIONS AND ACTIVITIES

- **Association Memberships**
  North Carolina State Certified General Real Estate Appraiser, October 2006, Certificate No. A6169

RELATED EXPERIENCE

- Provided real estate consulting services for a variety of clients including real estate brokers, property owners and financial planners
- Performed financial feasibility studies for multiple property types including golf communities, and renovation projects.
- Developed plan for self-contained communities.
- Race Track expertise

APPRAISAL EXPERIENCE

A partial list of types of properties appraised include:
Retail Properties, Single and Multi-Tenant, Proposed and Existing
Office Single and Multi-Tenant Proposed and Existing
Mixed-Use Properties, Proposed and Existing
Industrial Properties, Warehouse, Flex and Manufacturing
Vacant Land
Condemnation
C-Stores
Race Tracks

CLIENTELE

Bank of America
Transylvania County
Cabarrus County
Mecklenburg County
City of Statesville
NC Department of Transportation
Henry County, GA
Town of Loudon, NH
First Citizens Bank
City of Charlotte
City of Concord
Union County
BB & T
Aegon USA Realty Advisors
Sun Trust Bank
First Charter Bank
Regions Bank
Charlotte Housing Authority
Alliance Bank and Trust
Broadway Bank
Duke Energy Corporation
Jim R. Funderburk, PLLC
Hamilton, Fay, Moon, Stephens, Steele & Martin
Senator Marshall A. Rauch
Perry, Bundy, Plyler & Long, LLP
Robinson, Bradshaw & Hinson
CSX Real Property
Baucom, Clayton, Burton, Morgan & Wood, PA
City of Mount Holly
Our Towns Habitat for Humanity
Parker, Poe, Adams & Bernstein, LLP
Central Carolina Bank
Southern Community Bank and Trust

Sabre Industries™
INNOVATION DELIVERED

February 7, 2022

Tim Scott
Peaknet
9887 4th Street North, Suite 100
St. Petersburg, FL 33702

RE: Proposed 199' Monopole for Roper's Mountain, SC

Dear Mr. Scott,

Upon receipt of order, we propose to design and supply the above referenced tower for a Basic Wind Speed of 108 mph with no ice and 30 mph + 1.5" ice, Risk Category II, Exposure Category B, and Topographic Category 1, in accordance with the Telecommunications Industry Association Standard ANSI/TIA-222-H, "Structural Standard for Antenna Supporting Structures and Antennas".

When designed according to this standard, the wind pressures and steel strength capacities include several safety factors, resulting in an overall minimum safety factor of 25%. Therefore, it is highly unlikely that the monopole will fail structurally in a wind event where the design wind speed is exceeded within the range of the built-in safety factors.

Should the wind speed increase beyond the capacity of the built-in safety factors, to the point of failure of one or more structural elements, the most likely location of the failure would be within the monopole shaft, above the base plate. Assuming that the wind pressure profile is similar to that used to design the monopole, the monopole will buckle at the location of the highest combined stress ratio within the monopole shaft. This is likely to result in the portion of the monopole above leaning over and remaining in a permanently deformed condition. ***Please note that this letter only applies to the above referenced monopole designed and manufactured by Sabre Towers & Poles***. This would effectively result in a 50' fall radius at ground level.

Sincerely,

Robert E. Beacom, P.E., S.E.
Engineering Supervisor